AFGHAN NATIONAL POLICE STANDARD BUILDING DESIGNS

GUARD SHACK

SHEET INDEX

COVER SHEET

- GENERAL NOTES
- DESIGN CRITERIA & SCHEDULES
- FOUNDATION & ROOF FRAMING PLANS
- SECTIONS AND DETAILS
- TYPICAL DETAILS
- FLOOR AND ROOF PLANS AND DETAILS
- EXTERIOR ELEVATIONS, BUILDING AND WALL SECTIONS
- DOOR, WINDOW & FINISH TYPES & DETAILS
- E0 ELECTRICAL SYMBOLS AND ABBREVIATIONS
- LIGHTING AND POWER PLAN
- **DETAILS**
- **E**3 LIGHT FIXTURE SCHEDULE
- E4 PANEL SCHEDULES AND RISER DIAGRAM



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				DATE		
				DESCRIPTION		
				7		
				SYMBOL		

GHAN NATIONAL POLICE STANDARD DESIGN GUARD SHACK

SHEET REFERENCE

G1

GENERAL NOTES

1.0 THIS PROJECT HAS BEEN DESIGNED FOR THE WEIGHTS AND MATERIALS INDICATED ON THE SHEETS AND FOR THE LIVE LOADS INDICATED IN THE DESIGN DATA. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE ALLOWABLE CONSTRUCTION LOADS AND TO PROVIDE PROPER DESIGN AND CONSTRUCTION OF FALSEWORK, FORMWORK, STAGING, BRACING, SHEETING AND SHORING, ETC.

1.1 COORDINATE THESE SHEETS WITH THE ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, AND CIVIL SHEETS. ALL DIMENSIONS SHOWN ON THE SHEETS ARE MILLIMETERS UNLESS NOTED OTHERWISE.

1.2 THE CONTRACTOR SHALL VERIFY AND COORDINATE ALL FLOOR AND ROOF OPENING SIZES AND LOCATIONS, EQUIPMENT PAD SIZES AND LOCATIONS, ANCHOR BOLT LAYOUTS, ETC WITH EQUIPMENT SELECTED. THE CONTRACTOR SHALL MAKE ANY REQUIRED MODIFICATIONS AT NO ADDITIONAL COST

1.3 THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING SHEETS FOR SLEEVES, CURBS, INSERTS OR OPENINGS, ETC. NOT HEREIN INDICATED.

1.4 SLAB OPENINGS SMALLER THAN 250mm DIA TO BE CORE DRILLED IN FIELD UON. SEE MECHANICAL, ELECTRICAL AND PLUMBING SHEETS FOR LOCATIONS OF THESE OPENINGS.

1.5 WORK NOT INCLUDED ON THE SHEETS BUT IMPLIED TO BE SIMILAR TO THAT SHOWN AT CORRESPONDING PLACES ELSEWHERE ON THE SHEETS SHALL BE REPEATED

1.6 IN CASE OF CONFLICT BETWEEN THE NOTES, DETAILS AND SPECIFICATIONS THE MOST RIGID REQUIREMENTS SHALL GOVERN

1.7 SEE ARCHITECTURAL SHEETS FOR LOCATIONS OF MASONRY AND DRYWALL NON-LOAD BEARING PARTITIONS. PROVIDE COMPRESSIBLE FIRESAFING AT TOP OF WALL AS REQUIRED BY ARCHITECTURAL SHEETS.

1.8 COORDINATE FINISHED FLOOR DATUM ELEVATION 0.0m WITH THE CIVIL SHEETS.

2.0 <u>FOUNDATION NOTES</u>

THE GEOTECHNICAL ANALYSIS FOR THIS PROJECT IS THE RESPONSIBILITY OF THE CONTRACTOR AWARDED THE WORK. DESIGN VALUES USED IN THE STRUCTURAL ANALYSIS OF THE BUILDINGS HEREIN INDICATED HAVE BEEN ASSUMED AND SHALL BE CONFIRMED AND VERIFIED AS PART OF THE GEOTECHNICAL INVESTIGATION. VALUES WHICH DO NOT MEET THE REQUIREMENTS INDICATED ON SHEET S2 SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE CONTRACTING OFFICER FOR CONSIDERATION AND DETERMINATION ON THE NEXT APPROPRIATE COURSE OF ACTION.

2.2 SEE THE SPECIFICATION FOR ADDITIONAL REQUIREMENTS TO THOSE OUTLINED IN THE GEOTECHNICAL INVESTIGATION FOR EXCAVATION AND PREPARATION OF THE FOUNDATION AND THE SLAB ON GRADE SUBGRADE INCLUDING COMPACTION PROCEDURES.

2.3 EXCAVATIONS FOR FOOTINGS SHALL HAVE THE SIDES AND BOTTOMS TEMPORARILY LINED WITH 0.25mm POLYETHYLENE IF PLACEMENT OF CONCRETE DOES NOT OCCUR WITHIN 24 HRS OF THE EXCAVATION OF THE FOOTING.

2.4 FOUNDATION CONDITIONS NOTED DURING CONSTRUCTION WHICH DIFFER FROM THOSE DESCRIBED IN THE GEOTECHNICAL REPORT SHALL BE REPORTED TO THE GENERAL CONTRACTOR BEFORE FURTHER CONSTRUCTION IS ATTEMPTED. SEE PROJECT SPECIFICATIONS.

2.5 NO FOOTINGS OR SLABS SHALL BE POURED INTO OR AGAINST SUBGRADE CONTAINING FREE WATER, FROST, ICE OR LOOSE MATERIAL. FROST DEPTH ASSUMED TO BE 800MM 2.6 ALL SLAB-ON-GRADE, TRENCH BOTTOMS AND OTHER ON-GRADE INTERIOR HORIZONTAL

SURFACES SHALL BE PLACED OVER A 0.25mm VAPOR RETARDER OVER A 100mm #57 STONE WATER BARRIER PLACED ON SUBGRADE PROPERLY PREPARED IN ACCORDANCE WITH THE CONTRACT SPECIFICATIONS. (UON) 2.7 SEE PLUMBING, ELECTRICAL & CIVIL SHEETS FOR REQUIRED UNDERSLAB UTILITIES.

2.8 SEE ARCHITECTURAL SHEETS FOR ALL WATERPROOFING DETAILS AND MATERIALS. 2.9 IF UNDERMINING OF FOOTINGS OCCURS, FILL VOIDS WITH 15MPa CONCRETE, DO NOT ATTEMPT TO REPLACE AND RECOMPACT SOIL.

3.0 CONCRETE

3.1 CONCRETE SHALL HAVE THE UNIT WEIGHT AND THE MINIMUM COMPRESSIVE STRENGTHS (f'c) AT 28 DAYS AS SHOWN IN THE CONCRETE MATERIALS SCHEDULE ON THIS SHEET. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION. ENTRAIN AIR TO PRODUCE TOTAL AIR CONTENT ACCORDING TO THE SPECIFICATIONS FOR CONCRETE EXPOSED TO FREEZING TEMPERATURES (EXTERIOR FOOTINGS, SLAB TURNDOWNS, EXTERIOR SLABS

AND SLABS-ON-GRADE, EXTERIOR RETAINING WALLS, AND EXTERIOR GRADE BEAMS.) MWFRS MAIN WIND FORCE RESISTING SYSTEM 3.2 GROUT FOR BASE PLATES SHALL BE NON-SHRINKABLE GROUT AND SHALL HAVE A MINIMUM SPECIFIED COMPRESSIVE STRENGTH AT 28 DAYS OF 35MPa. UNLESS NOTED

3.3 NO CALCIUM CHLORIDE SHALL BE USED IN ANY CONCRETE

3.4 MIXING. TRANSPORTING AND PLACING OF CONCRETE SHALL CONFORM TO 301M-05.

3.5 ALL CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF THE AMERICAN CONCRETE INSTITUTE (ACI) 318M MANUAL (metric), "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE". AND REQUIREMENTS OUTLINED IN THE CONTRACT SPECIFICATIONS. WHEN THERE IS A CONFLICT BETWEEN ACI AND THE SPECIFICATIONS. THE MORE STRINGENT SHALL GOVERN.

3.6 CHAMFER ALL EXPOSED EXTERNAL CORNERS OF CONCRETE WITH 20mm x45 DEGREE CHAMFER UON.

3.7 CONCRETE REINFORCEMENT BARS SHALL CONFORM TO ASTM A615M, GRADE 420, REINFORCING BARS SHALL NOT BE TACK WELDED, WELDED, HEATED OR CUT, UNLESS INDICATED ON THE CONTRACT DOCUMENTS. ALL LAP SPLICES SHALL BE CLASS "B"

3.8 HORIZONTAL FOOTING AND HORIZONTAL WALL REINFORCEMENT SHALL BE CONTINUOUS AND SHALL HAVE 90 DEGREE BENDS AND EXTENSIONS, OR CORNER BARS OF EQUIVALENT SIZE LAPPED WITH A CLASS B TENSION SPLICE AT CORNERS AND INTERSECTIONS. TOP BAR CRITERIA SHALL APPLY IF 300mm OR MORE OF FRESH CONCRETE IS PLACED BELOW BAR.

3.9 SLABS-ON-GRADE SHALL HAVE CONSTRUCTION JOINTS OR CRACK CONTROL JOINTS AS SHOWN ON THE SHEETS. CONSTRUCTION JOINTS CAN BE USED AT CONTROL JOINT LOCATIONS AT CONTRACTORS OPTION. SEE SLAB PLANS & JOINT DETAILS FOR ADDITIONAL INFORMATION. FOR AREAS NOT SHOWN ON THE SHEETS, THE MAXIMUM SPACING OF CONSTRUCTION/ CRACK CONTROL JOINTS SHALL BE 4800 mm.

3.10 SEE SPECIFICATIONS FOR ALL WATERPROOFING/DAMPPROOFING REQUIREMENT. 3.11 ALL CONCRETE REINFORCEMENT SHALL BE DETAILED, FABRICATED, LABELED, SUPPORTED, AND SPACED IN FORMS AND SECURED IN PLACE IN ACCORDANCE WITH THE PROCEDURES AND REQUIREMENTS OUTLINED IN THE LATEST EDITION OF THE "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE", ACI 318M, AND THE "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES". ACI 315M, LATEST EDITION.

3.12 SHOP DRAWINGS SHOWING REINFORCING DETAILS, INCLUDING STEEL SIZES, SPACING AND PLACEMENT, SHALL BE SUBMITTED FOR REVIEW PRIOR TO FABRICATION.

3.13 ALL DOWELS SHALL MATCH SIZE AND NUMBER OF MAIN REINFORCING, UNLESS NOTED

OTHERWISE ON THE SHEETS 3.14 ADDITIONAL BARS SHALL BE PROVIDED AROUND ALL FLOOR AND WALL OPENINGS AS SHOWN ON THE SHEETS

3.15 SEE ARCHITECTURAL SHEETS FOR TYPE AND LOCATION OF ALL FLOOR FINISHES

3.16 THE CONTRACTOR SHALL COORDINATE ADDITIONAL WALL/SLAB OPENINGS NOT SHOWN ON STRUCTURAL SHEETS. SEE MECHANICAL, ELECTRICAL, PLUMBING AND CIVIL SHEETS. 3.17 THE SUB-CONTRACTOR SHALL VERIFY ALL OPENINGS, PAD SIZES, AND ANCHOR BOLTS

WITH EQUIPMENT SELECTED 3.18 FOR ALL WALLS & PIERS, PROVIDE DOWELS INTO FOOTING AT EACH VERT REINF BAR UON DOWEL SIZE SHALL BE SAME AS VERT REINF.

3.19 ALL REINFORCING INDICATED TO BE WELDED SHALL BE IN ACCORDANCE WITH ASTM A706M. "LOW ALLOY STEEL DEFORMED BARS FOR CONCRETE REINFORCEMENT". ANY INSTALLATIONS USING MANUFACTURER'S EQUIPMENT SHALL BE PER MANUFACTURER'S

RECOMMENDATIONS. 3.20 PROVIDE CONCRETE POUR STOPS OR FORMED AS REQUIRED FOR INSTALLATION OF ALL CONCRETE WORK.

3.21 PROVIDE ADDITIONAL (2)- $\#13 \times 600$ mm REINFORCING BARS IN SLAB-ON GRADE AT ALL RE-ENTRANT CORNERS. PLACE BARS AT MID-DEPTH OF SLAB WITH A CLEARANCE OF 50mm FROM CORNER UON.

4.0 <u>CONCRETE MASONRY</u>

MASONRY CONSTRUCTION AND MATERIALS SHALL CONFORM TO ALL REQUIREMENTS OF THESE CONTRACT DOCUMENTS AND THE PROJECT SPECIFICATIONS

4.2 THE SPECIFIED ULTIMATE COMPRESSIVE STRENGTH OF CONCRETE MASONRY (f'm) ON THE NET AREA IS A MINIMUM OF 10.4 MPa.

4.3 PROVIDE TWO #16 BARS CONTINUOUS IN ALL CMU AND CAST-IN-PLACE BOND BEAMS UON ON THE SHEETS. BOND BEAMS SHALL BE CONTINUOUS AND SPACED AT A MAXIMUM OF 1200mm OC VERTICALLY. PROVIDE BOND BEAM STARTER COURSE AT BOTTOM OR FIRST COURSE ON ALL MASONRY WALLS AND PARTITIONS. ALL BOND BEAMS SHALL BE A MINIMUM OF 200mm IN DEPTH WITH REINFORCING BEING CONTINUOUS AND HAVING STANDARD ACI 180° HOOKS AT EACH END. PROVIDE STANDARD BAR SPLICES AS SPECIFIED.

4.4 FOR WALL REINFORCING, SEE DETAIL 7 ON SHEET S5

4.5 CMU CELLS THAT REQUIRE VERTICAL REINFORCING BARS AS INDICATED ON THE CONTRACT DRAWINGS AND/OR SPECS SHALL HAVE REINF BARS PLACED IN CENTERS OF CMU CELLS AND CONTINUOUSLY GROUTED UON.

4.6 PROVIDE LADDER TYPE JOINT REINFORCEMENT AT (200mm EXTERIOR & 400mm INTERIOR) ON CENTER MAXIMUM UON MINIMUM ROD SIZE USED SHALL BE 9 GA. DEFORMED WIRE AND CONFORM TO ASTM A82M, UON.

4.7 PROVIDE CONTROL JOINTS AS INDICATED ON THE ARCHITECTURAL SHEETS. 4.8 GROUT FOR MASONRY SHALL BE NORMAL WEIGHT AND HAVE A MINIMUM COMPRESSIVE

STRENGTH OF 25 MPa AT 28 DAYS. GROUT SHALL CONFORM TO ASTM C476M. GROUT LIFTS SHALL NOT EXCEED 1400mm

4.9 USE MORTAR TYPE S CONFORMING TO ASTM C270M, SEE SPECIFICATIONS. 4.10 CONCRETE MASONRY UNITS SHALL BE NORMAL WEIGHT AND CONFORM TO ASTM C90M. 4.11 ALL CMU CELLS, OPEN CAVITIES, AND AIR SPACES SHALL BE GROUTED TO STOP

FRAGMENTS FROM MORTAR BLAST 4.12 BOND BEAM REINFORCING SHALL BE DISCONTINUOUS AT CONTROL JOINTS (UON)

MAXIMUM CONTROL JOINT SPACING SHALL BE AS INDICATED ON THE ARCHITECTURAL SHEETS. 4.13 CONTRACTOR SHALL COORDINATE LOCATION OF ALL OPENINGS SEE ARCH, MECH, ELEC,

AND PLUMBING SHEETS. FOR SIZE AND LOCATION OF OPENINGS.

4.14 MASONRY WALLS SHALL NOT BE BACK FILLED PRIOR TO THE MORTAR AND GROUT ATTAINING THEIR RESPECTIVE MAXIMUM DESIGN STRENGTHS PER SPECIFICATIONS.

5.0 CFMRF - COLD FORM METAL ROOF FRAMING SYSTEM

5.1 CFMF SHALL BE DESIGNED BY CFMF MANUFACTURER'S ENGINEER FOR ALL LOADING

PER CODE AND AS INDICATED ON THE SHEETS. 5.2 FOR WIND LOADS, SEE THE DESIGN CRITERIA ON SHEET S2.

5.3 SUBMIT VENDOR'S PUBLISHED LITERATURE. TEST DATA AND INSTALLATION INSTRUCTIONS FOR METAL STUD ASSEMBLY AND ACCESSORIES INCLUDING OTHER DATA AS MAY BE REQUIRED TO CERTIFY COMPLIANCE WITH PERFORMANCE REQUIREMENTS SPECIFIED HEREIN.

5.4 SHOP DRAWINGS AND DESIGN ANALYSIS SHALL BE STAMPED AND APPROVED BY A LICENSED PROFESSIONAL ENGINEER.

5.5 CONNECTIONS AND GAUGE SIZES ARE MINIMUM AND SHALL BE INCREASED AS NECESSARY TO PROVIDE A STRUCTURALLY ADEQUATE SYSTEM. KICKERS MAY BE ADDED TO REDUCE THE STUD HEIGHTS WHERE ACCEPTABLE AND COORDINATED WITH THE ARCHITECTURAL DRAWINGS.

5.6 CRMRF SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES:

STUD/RAFTER/EAVE STRUT/BRACE/BLOCKING: Fv = 344 MPa

GAUGE = 18DEPTH = 152.3 mmWIDTH = 34.8 mmMOMENT OF INERTIA, $Ix = 847 \times 10^3 \text{ mm}^4$ SECTION MODULUS, $Sx = 11.2x10^3 \text{ mm}^3$ TRACK: $F_V = 344 \text{ MPa}$ GAUGE = 16DEPTH = 152.3 mmWIDTH = 38 mmMOMENT OF INERTIA, $Ix = 1083 \times 10^3 \text{ mm}^4$

SECTION MODULUS, $Sx = 13.8 \times 10^3 \text{ mm}^3$

PURLIN/SUBGIRT: Fy = 393 MPaGAUGE = 16

MOMENT OF INERTIA (TOP COMPRESSION), $Ixt = 23.7x10^3 \text{ mm}^4$ MOMENT OF INERTIA (BOTT COMPRESSION), $lxb = 22.7x10^3 \text{ mm}^4$ SECTION MODULUS (TOP COMPRESSION), $Sxt = 1.8x10^3 \text{ mm}^3$ SECTION MODULUS (BOTT COMPRESSION), $Sxb = 1.7x10^3 \text{ mm}^3$

MINIMUM LAP SPLICES OF REINFORCING BARS IN TENSION (PER ACL 318M_O5)

	IN ILIVSION (FLIX ACI STOWI-US)								
	f'c = 28 MPa CONCRETE								
$\overline{}$	CENTER TO	(TOP E	BARS)	(OTHER BARS)					
AR ZE	CENTER BAR SPACING	LESS THAN 4db	4db OR MORE	LESS THAN 4db	4db OR MORE	4db			
	#10	460	460	410	410	40			
	#13	660	610	510	480	50			
	#16	1020	760	790	580	60			

NOTES:

LAP SPLICES ABOVE ARE IN MILLIMETERS UON. YIELD STRENGTH OF REINFORCEMENT, fy, IS 420MPa (LAP SPLICE LENGTH IS IN MILLIMETERS). 6.

CONCRETE IS NORMAL WEIGHT (2400Kg/m³)

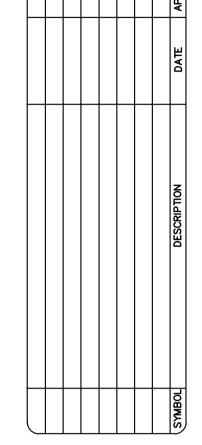
4. TOP BAR INDICATES HORIZONTAL REINFORCEMENT WHICH IS PLACED ABOVE 300mm OR MORE OF FRESH CONCRETE.

SEE COLUMN SCHEDULE FOR COLUMN AND SHEAR WALL VERTICAL LAP SPLICE.

STRAIGHT DEVELOPMENT LENGTH OF AN UNLAPPED BAR IS EQUAL TO VALUE FROM TABLE DIVIDED BY 1.3. CATEGORY FOR BARS SPACED LESS THAN 4d, OR ON CENTER CORRESPONDS TO CATEGORY 1 IN THE CRSI HANDBOOK WHEREAS FOR BARS SPACED 4d, OR MORE

ON CENTER CORRESPOND TO CRSI CATEGORY 5.

JS_A<u>r</u>my Corps of Engineers Afghanistan Engineer District



CONCRETE MATERIALS	SCHEDULE	
STRUCTURAL ELEMENT	f'c CONCRETE COMPRESSIVE STRENGTH @ 28 DAYS (MPa)	
SLAB-ON-GRADE/TURN-DOWN SLABS	28	
ROOF AND FLOOR SLABS	28	
ALL FOOTINGS (UON)	28	
MISC. CURBS, WALLS AND PADS UON	28	
CAST-IN-PLACE LINTEL	28	<u> </u>
NOTES:		

ALL CONCRETE SHALL BE NORMAL WEIGHT CONCRETE. (2400 Kg/m³ UON) ALL CONCRETE SHALL HAVE A WATER-CEMENT RATIO OF 0.45.

STANDARD HOOKS

HOOK DEVELOPMENT LENGTH Ldh

(mm)

f'c 28 MPa

180

250

300

380

430

480

560

610

690

BAR SIZE

#10

#13

#16

#19

#22

#25

#29

#32

#36

IN TENSION PER

(ACI 318M - 05)

–	ONRY REINFORCING IMUM LAP SPLICES
BAR SIZE	BASIC LAP SPLICE Ld FOR CMU REINFORCING(mm)
#10	450
#13	600
#16	750

DESIGNED
GDH
DWN BY:
MDB
CHK BY:
CWW

HOOK EXTENSION PER ACI 318M-05 ∠ HOOK DEVELOPMENT. LENGTH. Ldh ARE ASSUMED TO NOT BE MET. ARE ASSUMED TO NOT BE MET.

1. CONCRETE IS NORMAL WEIGHT CONCRETE.

2. BAR YIELD STRENGTH, fy = 420 MPa 3. SIDE COVER REQUIREMENTS OF ACI SECT. 12.5.3

4. TIE OR STIRRUP REQUIREMENTS OF ACI SECT. 12.5.3

5. REDUCTION FOR EXCESS REINFORCEMENT IS NOT TAKEN.

6. HOOK DEVELOPMENT LENGTH IS VALID FOR 180° HOOKS ALSO.

NOTES IAN NATIONAL STANDARD DESIGN

> REFERENCE NUMBER: **S1**

SHEET

1.0 DESIGN LOADS

1.1 DEAD LOADS

1.1.1 ROOF DEAD LOADS — CONVENTIONAL FRAMING

	MAXIMUM GRAVITY LOAD	MINIMUM GRAVITY LOAD
LIGHT GAUGE FRAMING METAL ROOFING INSULATION MISC	0.20 KPa 0.14 KPa 0.10 KPa 0.05 KPa	0.15 KPa 0.05 KPa 0.05 KPa 0.00 KPa
	0.49 KPa	0.25 KPa

1 1 2 ROOF DEAD LOADS - CONCRETE EDAMINO

1.2	ROOF	DEAD	LOADS	_	COI	NCRETE	FR	AMINO	<u>;</u>
						M. GRAVIT		MUM .OAD	•
	C FLAT I/ELEC,		BING			0.	15	KPa KPa KPa	
						5.	00	KPa	

1.2 LIVE LOADS (PER IBC 2006)

1.2.1 ROOF LIVE LOADS: ALL BUILDINGS

GREATER OF 1.0 KPa MINIMUM OR SNOW LOAD

1.2.2 SLAB-ON-GRADE LIVE LOADS

ALL BUILDINGS

4.80 KPa

1.3 SNOW LOADS (PER IBC 2006)

1.3.1 DESIGN PARAMETERS

GROUND SNOW LOAD (per UFC 3-310-01) PER LOCAL CONDITION SNOW IMPORTANCE FACTOR 1.0 KPa

SNOW EXPOSURE FACTOR

1.0 KPa

1.4 SEISMIC LOADS (PER IBC 2006 & UFC 3-310-04)

1.4.1 SEISMIC PARAMETERS - LOAD BEARING MASONRY

SEISMIC OCCUPANCY CATEGORY				I
SEISMIC IMPORTANCE FACTOR (I)				1.0
SEISMIC SITE CLASS				
Ss				1.280
S1				0.510
Sds				0.853
Sd1				0.510
SEISMIC DESIGN CATEGORY				
SEISMIC RESISTING SYSTEM			BEARING	WALL SYSTEM
	SPECIAL	REINE	MASONRY	SHEAR WALLS

SPECIAL REINE MASONRY SHEAR WALLS RESPONSE MODIFICATION FACTOR (R)

RESPONSE COEFFICIENT (Cs) 0.120 SEISMIC ANALYTICAL PROCEDURE EQUIV LATERAL FORCE SEISMIC BASE SHEAR 44.5kN

1.6 WIND LOADS (PER IBC 2006)

1.6.1 DESIGN PARAMETERS

BASIC WIND SPEED	137 Km/
WIND IMPORTANCE FACTOR	1.
WIND EXPOSURE CATEGORY	
DIRECTIONALITY COEFFICIENT (Kd)	0.8
TOPOGRAPHIC FACTOR (Kzt)	1.

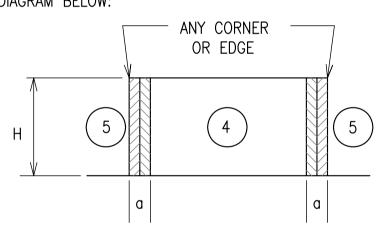
1.6.2 DESIGN WIND PRESSURE - MAIN WINDFORCE RESISTING SYSTEM

LOCATION	CORNER ZONE WIDTH "a"	MEAN ROOF HEIGHT "h"	/	LEEWARD WALL (@ MEAN ROOF HEIGHT)	ROOF
FIELD ZONE	N/A	3405mm	582 N/m ²	-463 N/m ²	-803 N/m ²
CORNER ZONE	1440mm	3405mm	883 N/m ²	-689 N/m ²	-1244 N/m ²

- a = 10% OF LEAST HORIZONTAL DIMENSION OR 0.4h, WHICHEVER IS SMALLER, BUT NOT LESS THAN EITHER 4% OF LEAST HORIZONTAL DIMENSION OR 0.9M.
- h = MEAN ROOF HIEGHT, IN METERS, EXCEPT THAT EAVE HIEGHT SHALL BE USED FOR ANGLE GREATER THAN 10°.

1.6.3 DESIGN WIND PRESSURE - WALL COMPONENTS AND CLADDING

EXTERIOR WALL SYSTEMS & THEIR ATTACHMENTS TO THE PRIMARY STRUCTURE SHALL BE DESIGNED FOR THE PRESSURES SHOWN IN THE DIAGRAM BELOW:

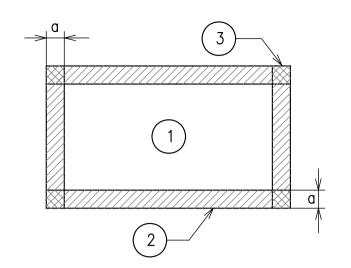


LOCATION	WINDWARD PRESSURE N/m² (inward)		LEEWARD N/m² (а	
	4	5	4	5	
MAIN BUILDING					(mm)
$AREA = 1 m^2$	627	627	-986	-1216	900
$AREA = 2 m^2$	589	589	-948	-1134.8	900
$AREA = 5 m^2$	565	565	-910	-1086.9	900
$AREA = 10 m^2$	565	565	-910	-1086.9	900

- 1. DESIGN WIND PRESSURES ABOVE REPRESENT THE NET PRESSURE (SUM OF
- INTERNAL AND EXTERNAL PRESSURE) APPLIED NORMAL TO ALL SURFACES.
- 2. LINEAR INTERPOLATION BETWEEN VALUES OF TRIBUTARY AREA IS PERMISSIBLE. 3. PLUS AND MINUS SIGNS SIGNIFY PRESSURE TOWARD AND AWAY FROM THE
- EXTERIOR SURFACE, RESPECTIVELY.

1.6.4 DESIGN WIND PRESSURE - ROOF COMPONENTS AND CLADDING

ROOF COMPONENTS & THEIR ATTACHMENTS SHALL BE DESIGNED FOR THE PRESSURES SHOWN IN THE ADJACENT DIAGRAM & TABLE BELOW:



ROOF MEAN HEIGHT

1.6 WIND LOADS (CON'T)

LOCATION	GROS	a		
	1	2	3	
MAIN BUILDING				(mm)
$AREA = 1 m^2$	-838	-1460	-1460	900
$AREA = 2 m^2$	-838	-1460	-1460	900
$AREA = 5 m^2$	-838	-1460	-1460	900
$AREA = 10 m^2$	-838	-1460	-1460	900

- DESIGN WIND PRESSURES ABOVE REPRESENT THE NET PRESSURE (SUM OF INTERNAL AND EXTERNAL PRESSURE) APPLIED NORMAL TO ALL SURFACES.
- . LINEAR INTERPOLATION BETWEEN VALUES OF TRIBUTARY AREA IS PERMISSIBLE. 3. PLUS AND MINUS SIGNS SIGNIFY PRESSURE TOWARD AND AWAY FROM THE EXTERIOR SURFACE, RESPECTIVELY.

2.0 FOUNDATION DESIGN CRITERIA (TO BE CONFIRMED BY THE CONTRACTOR)

THE GEOTECHNICAL ANALYSIS FOR THIS PROJECT IS THE RESPONSIBILITY OF THE CONTRACTOR AWARDED THE WORK. DESIGN VALUES USED IN THE STRUCTURAL ANALYSIS OF THE BUILDINGS HEREIN INDICATED HAVE BEEN ASSUMED AND SHALL BE CONFIRMED AND VERIFIED AS PART OF THE GEOTECHNICAL INVESTIGATION. VALUES WHICH DO NOT MEET THE REQUIREMENTS INDICATED BELOW SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE CONTRACTING OFFICER FOR CONSIDERATION AND DETERMINATION ON THE NEXT APPROPRIATE COURSE OF ACTION.

2.1.1 SOIL DESIGN PARAMETERS

NET ALLOWABLE SOIL BEARING CAPACITY	96.0 KPa
UNIT WEIGHT OF SOIL (moist)	1800 Kg/n
COEFF ACTIVE EARTH PRESSURE (Kpa)	0.30
COEFF PASSIVE EARTH PRESSURE (Kpp)	3.33
COEFF AT-REST EARTH PRESSURE (Kpr)	.55
COEFF OF SOIL FRICTION	.35
SUBGRADE MODULUS	4120 g/m ³

MINIMUM BEARING DEPTH BELOW GRADE 800mm SEISMIC SITE CLASS (based on in-situ soil)

HAH US Army Corps of Engineers Afghanistan Engineer District

				APR
				DATE
				DESCRIPTION
				SYMBOL

DESIGNED BY: DATE:	DATE:
НОЭ	60-30-00
DWN BY:	SUBMITTED BY:
MDB	BAKER
CHK BY:	FILE NO.:
CWW	ANPSDS-002XXX

IAN NATIONAL F STANDARD DESIGN GUARD SHACK

SHEET REFERENCE **NUMBER:**

CONCRETE COVER SCHEDULE

MINIMUM CONCRETE COVER PROTECTION FOR REINFORCEMENT BARS SHALL BE AS FOLLOWS: (SEE ACI 318M-05, SECTION 7.7 FOR CONDITIONS NOT NOTED). DIMENSIONS FOR BAR PLACEMENT GIVEN IN SECTIONS AND DETAILS SHALL SUPERSEDE MINIMUM COVER REQUIREMENTS GIVEN HERE. DIMENSIONS ARE IN mm.

FOOTINGS (EARTH FORMED)

(=)		, 0
COLUMNS / PIERS (TO TIES)		40
GRADE BEAMS OR SLAB TURNED DO	OWN EDGES:	
TOP BOTTOM (EARTH FORMED) SIDES (EARTH FORMED) SIDES (BOARD FORMED)	#16 BAR & SMALLER #19 THRU #36 BAR	40 70 70 40 50
ELEVATED BEAMS & SLABS:		
BEAM TIES & STIRRUPS (NOT E)	•	40
BEAM TIES & STIRRUPS (EXPOSI	ED TO WEATHER)	50
FLOOR SLABS (NOT EXPOSED TO FLOOR SLABS (EXPOSED TO WEA	•	20
#19 & LARGER	,	50
#13 & SMALLER		40
ROOF SLAB BARS		25
SLABS-ON-GRADE (NO EXPOSURE	TO WEATHER) FROM TOP	20
SLABS-ON-GRADE (EXPOSURE TO	WEATHER) FROM TOP	40
UTILITY TUNNEL WALLS, RETAINING (NO SURFACES SHALL BE EARTH EARTH SIDE AND FRONT SIDE (EX	FORMED)	
#16 BAR AND SMALLER		40
#19 THRU #36 BAR		50

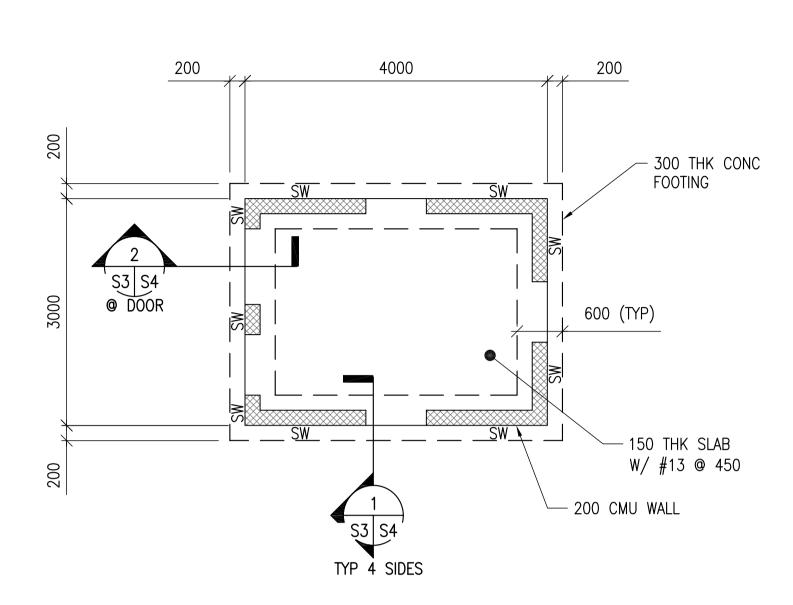
PROVIDE STANDARD BAR CHAIRS AND SPACERS AS REQUIRED TO MAINTAIN

CONCRETE PROTECTION SPECIFIED.

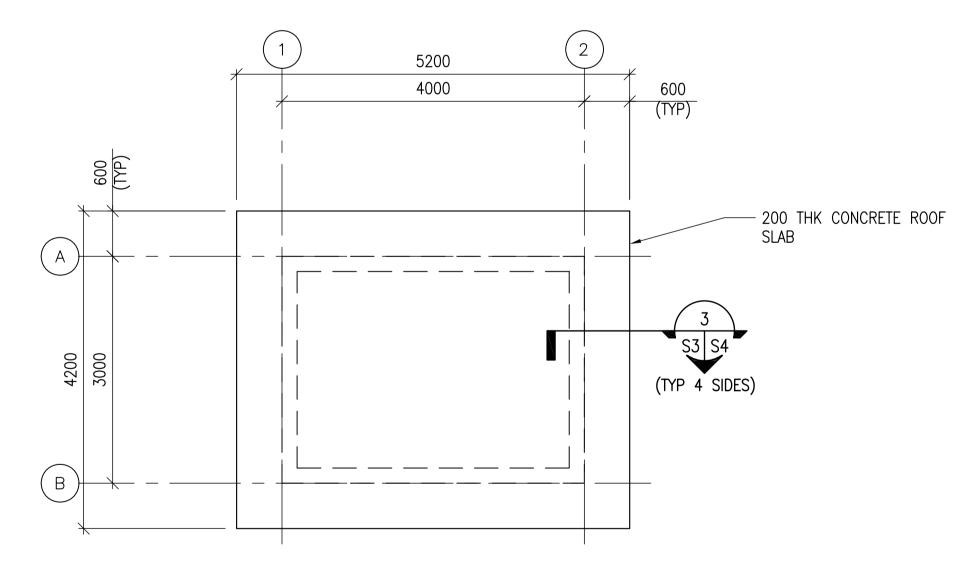
CMU LINTEL SCHEDULE										
OPENING TYPE OR SIZE, BEAM LOCATION OR TYPE	MAX SPAN (mm)	BEAM DEPTH (mm)	MAIN TOP	REINFORG BOTTOM	ING OTHER	SHEAR REINF STIRRUPS				
EXT WINDOW OR DOOR	900	400	(2)-#13		OTTILIX					
INT WALL OPENING, NON-BEARING	1800	400		(2)-#13						
INT WALL OPENING, NON-BEARING	900	200		(2)-#13						

- HAVE A MINIMUM COMPRESSIVE STRENGTH OF 28 MPa AT 28 DAYS.
- 5. CONTRACTOR SHALL SUBMIT FOR APPROVAL SHOP DRAWINGS AND SCHEDULES SHOWING SIZE, DETAILS, LOCATIONS, ETC FOR ALL CAST-IN-PLACE BEAMS IN CMU WALLS.

1. STRUCTURAL DRAWINGS DO NOT INDICATE ALL OPENINGS IN MASONRY WALLS. VERIFY NUMBER, SIZE AND LOCATION OF ALL OPENINGS IN MASONRY WALLS FROM ARCHITECTURAL SHEETS AND APPROVED PLUMBING, MECHANICAL, AND ELECTRICAL SHOP DRAWINGS. 2. PROVIDE 200mm BEARING EA END FOR 200mm DEEP CMU LINTEL. PROVIDE 400mm BEARING EA END FOR 400mm DEEP CMU LINTEL. 3. FOR HEAD DETAILS REFER TO ARCHITECTURAL SHEETS. 4. REINFORCING SHALL BE ASTM A615M, GRADE 420. CONCRETE FOR CAST-IN-PLACE BOND BEAMS SHALL





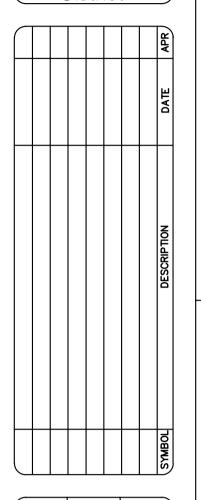




NOTES:

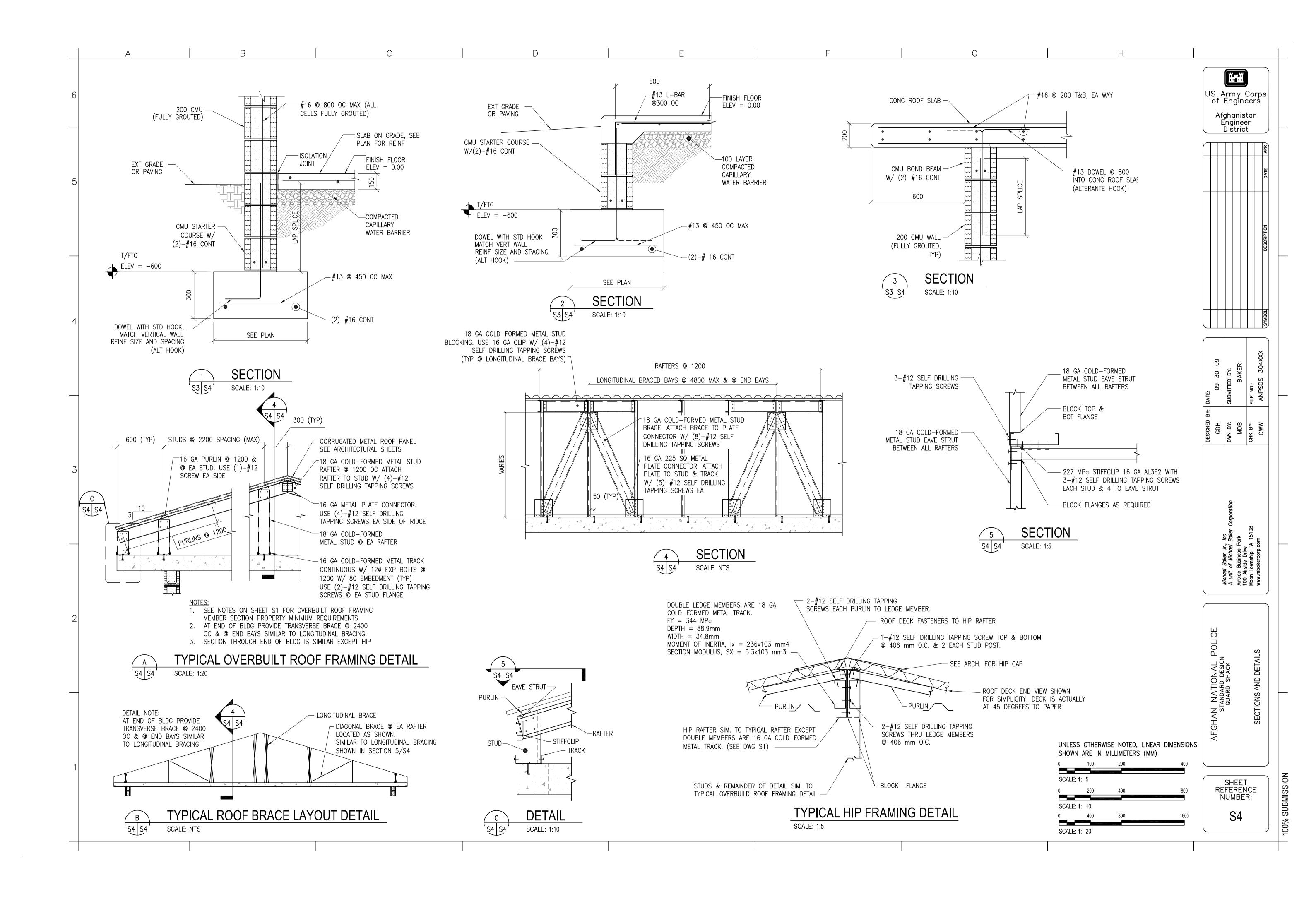
- 1. FINISH FIRST FLOOR ELEVATION SHALL BE (DATUM 0.0) ALL PLUS OR MINUS DIMENSIONS INDICATED ON PLAN OR REFERRED TO IN NOTES RELATE TO FINISH FIRST FLOOR ELEVATION.
- 2. TOP OF EXTERIOR FOOTINGS SHALL BE -600 UNLESS OTHERWISE INDICATED.
- 3. UNLESS OTHERWISE INDICATED, FLOORS SHALL BE 150 THICK CONCRETE SLAB-ON-GRADE W/ 13 DIA REBAR @ 450 OC EW (38 CLR TOP) OVER 100 COMPACTED POROUS FILL (#57 STONE)
- 4. REFER TO SHEETS S1 & S2 FÖR STRUCTÚRAL NOTES, ABBREVIATIONS AND SYMBOLS. 5. REFER TO ARCHITECTURAL SHEETS FOR MASONRY PARTITION TYPES AND
- SHEET S5 FOR REINFORCEMENT. 6. SEE MECHANICAL AND ELECTRICAL SHEETS FOR CONCRETE PAD
- LOCATIONS, SIZES, AND THICKNESS NOT SHOWN. SEE SHEET S5 FOR DETAILS.
- 7. REFER TO SHEET S5 FOR TYPICAL MASONRY WALL DETAILS. 8. COORD W/ ARCHITECTURAL SHEETS FOR COLD-FORMED STEEL
- OVERBUILT FRAMING ABOVE ROOF SLAB.
- 9. COLD-FORMED METAL OVERBUILT ROOF FRAMING NOT SHOWN FOR CLARITY. SEE FRAMING DETAILS AND SECTIONS ON SHEET S4.
- 10. "SW#" DENOTES MASONRY SHEAR WALL LOCATIONS. SEE "SPECIAL REINFORCED MASONRY SHEAR WALL ELEVATION ON SHEET S5 FOR REINFORCEMENT INFORMATION.

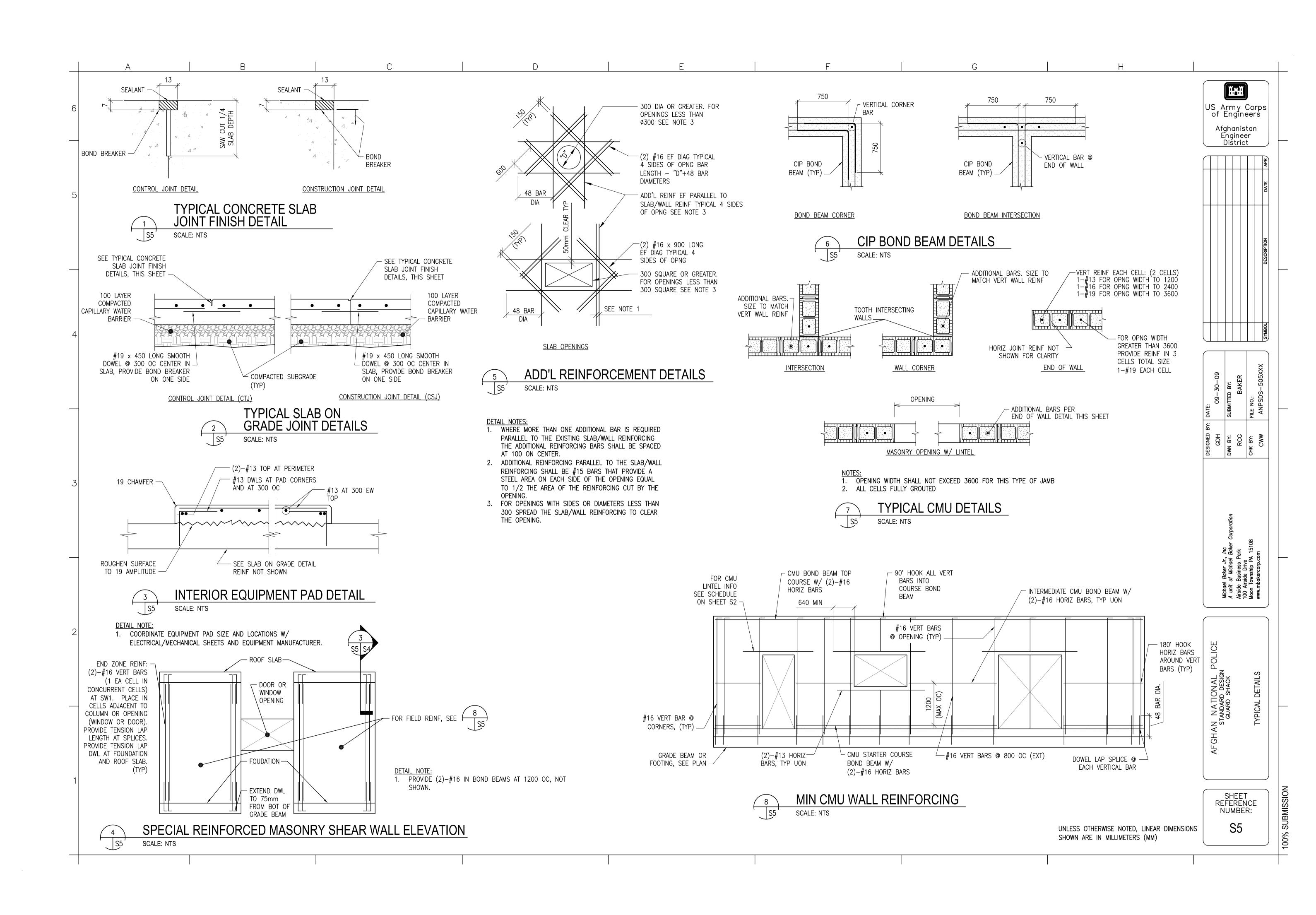


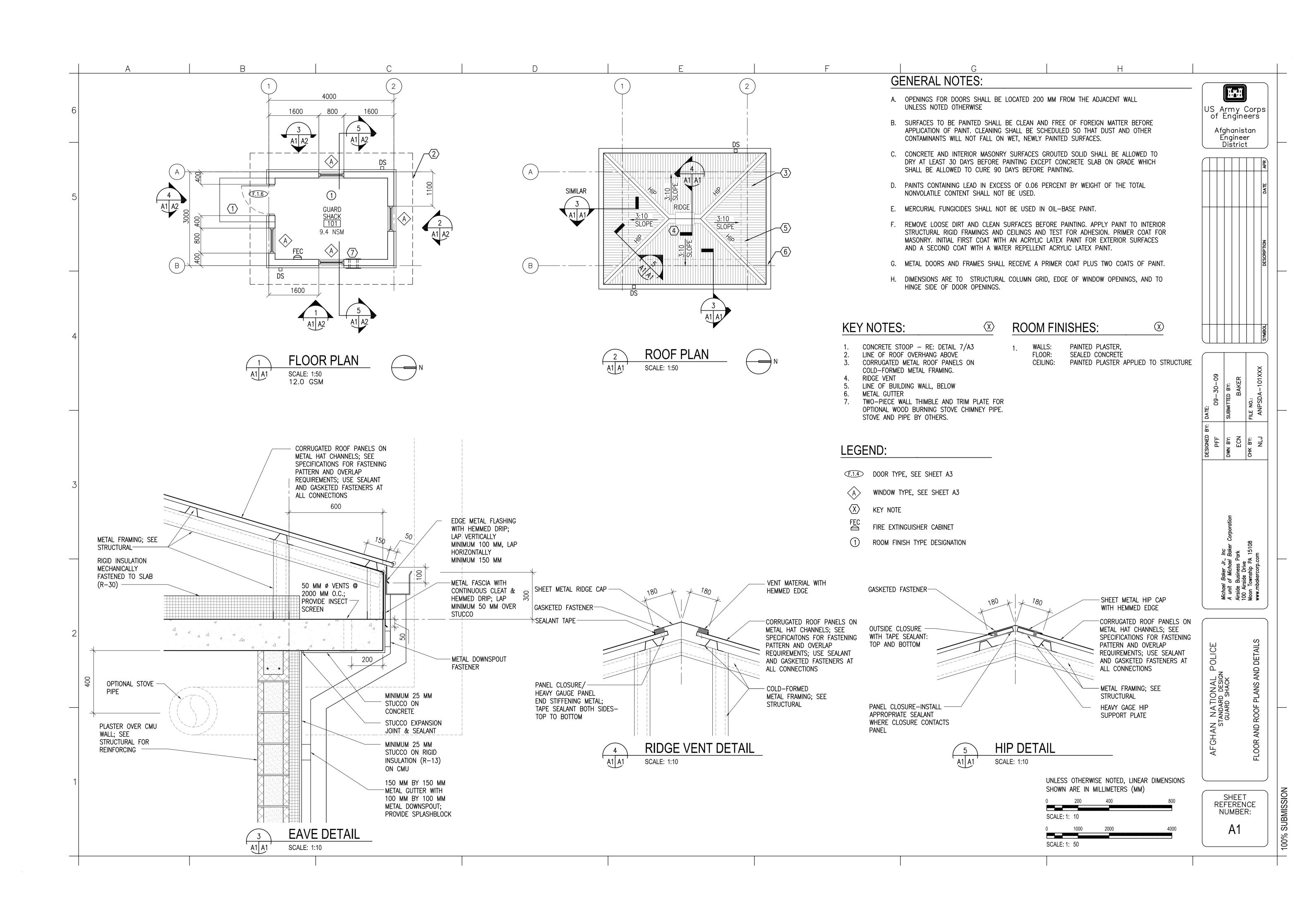


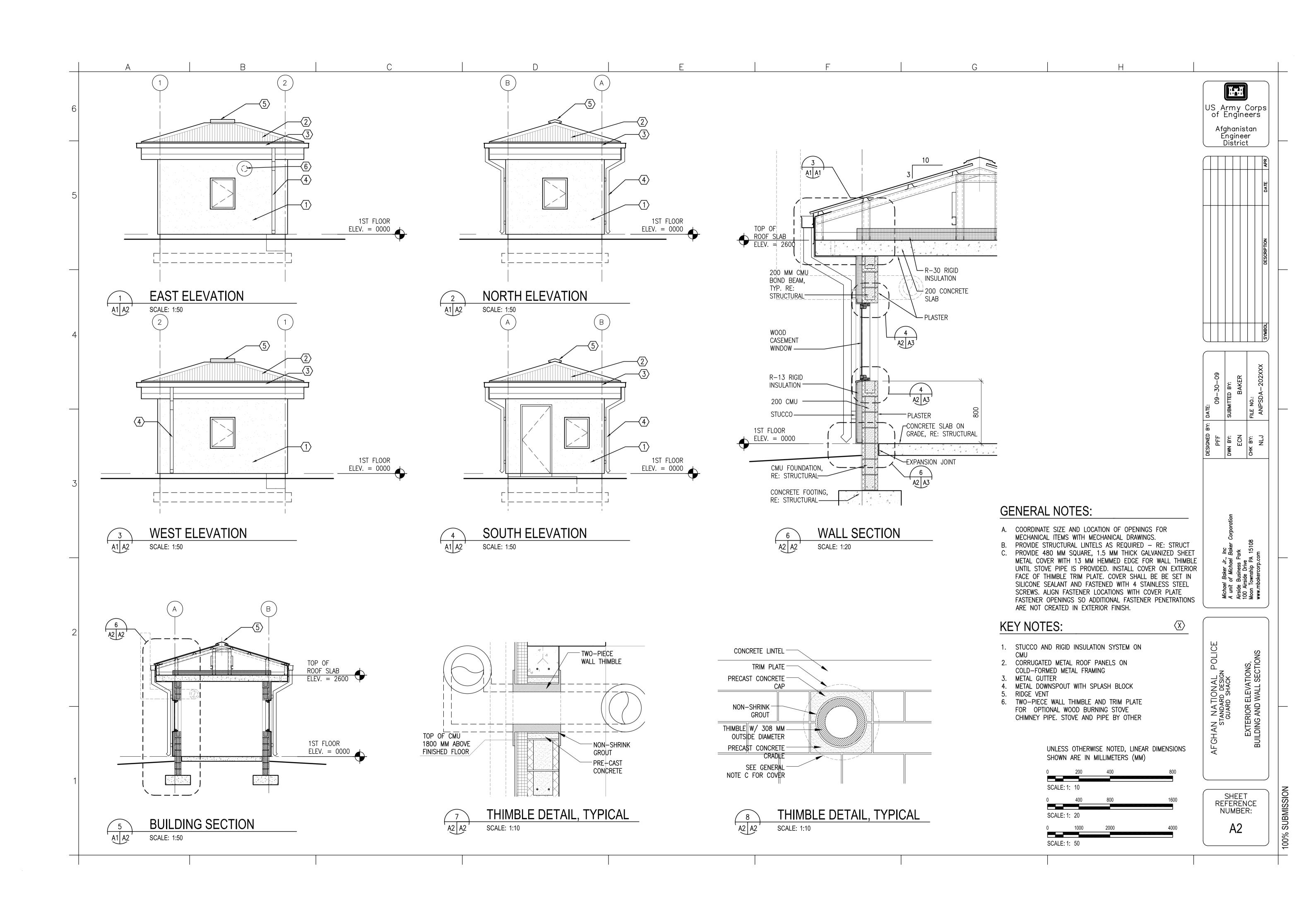
UNLESS OTHERWISE NOTED, LINEAR DIMENSIONS SHOWN ARE IN MILLIMETERS (MM)

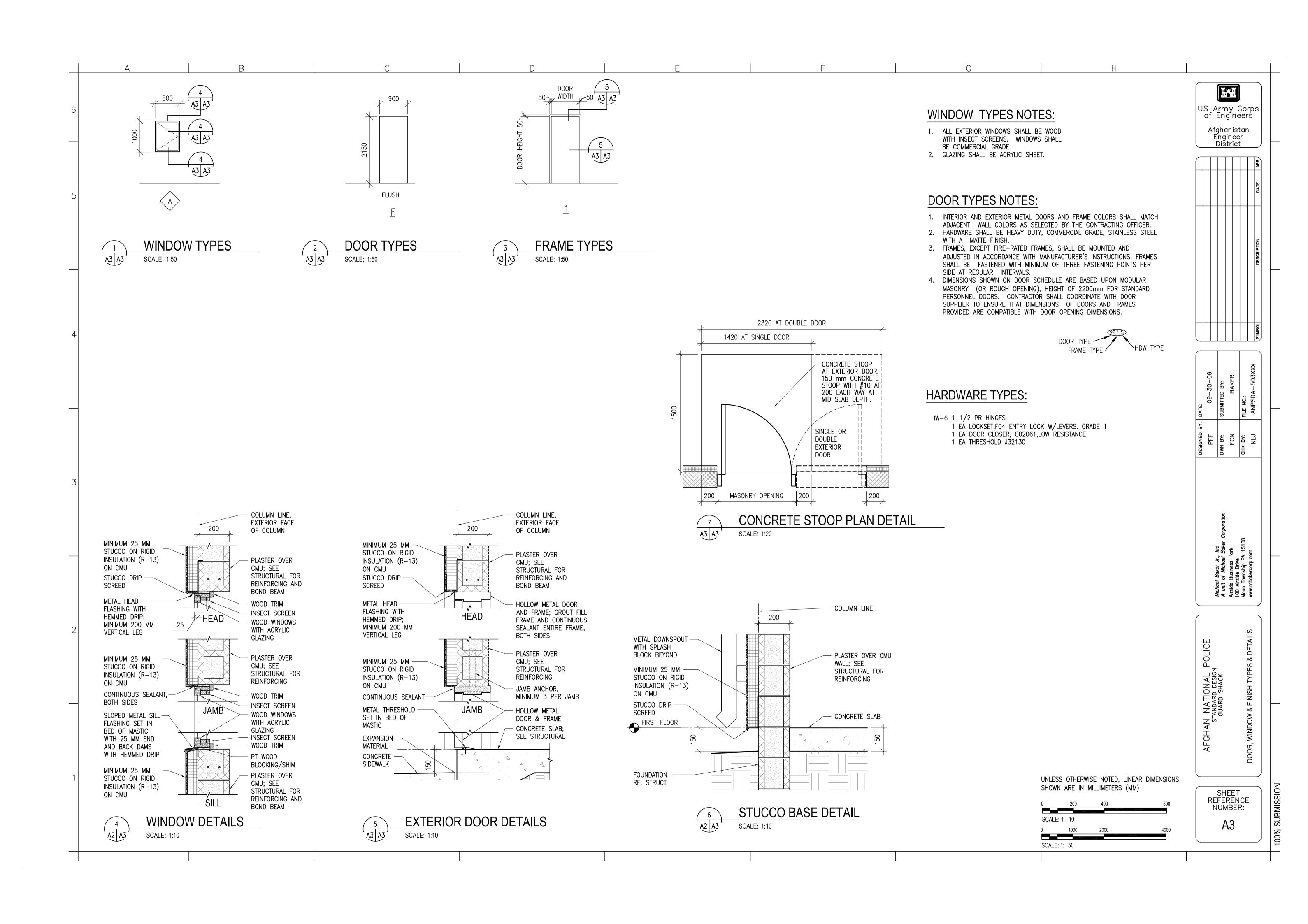
SHEET REFERENCE NUMBER: S3

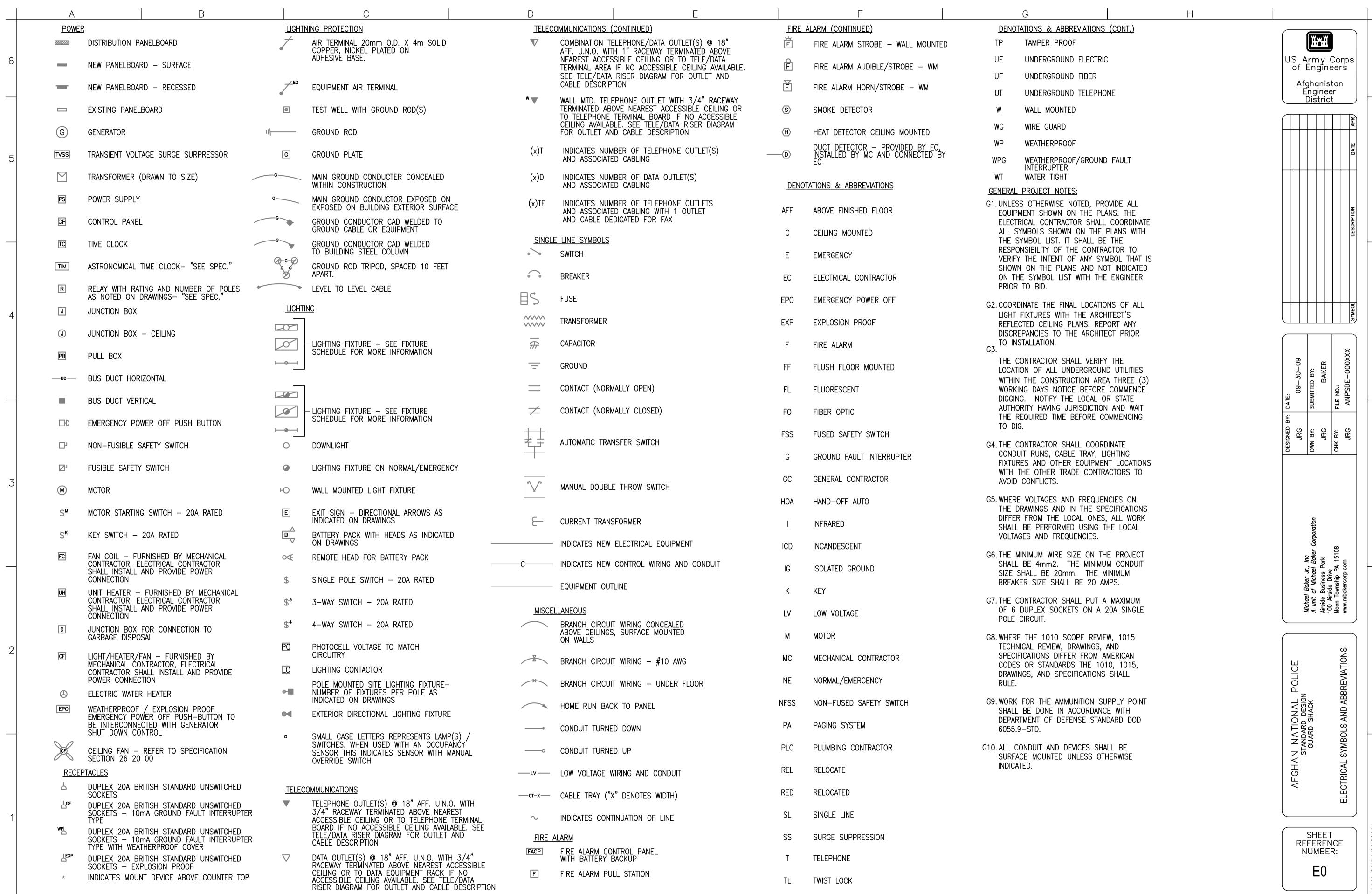


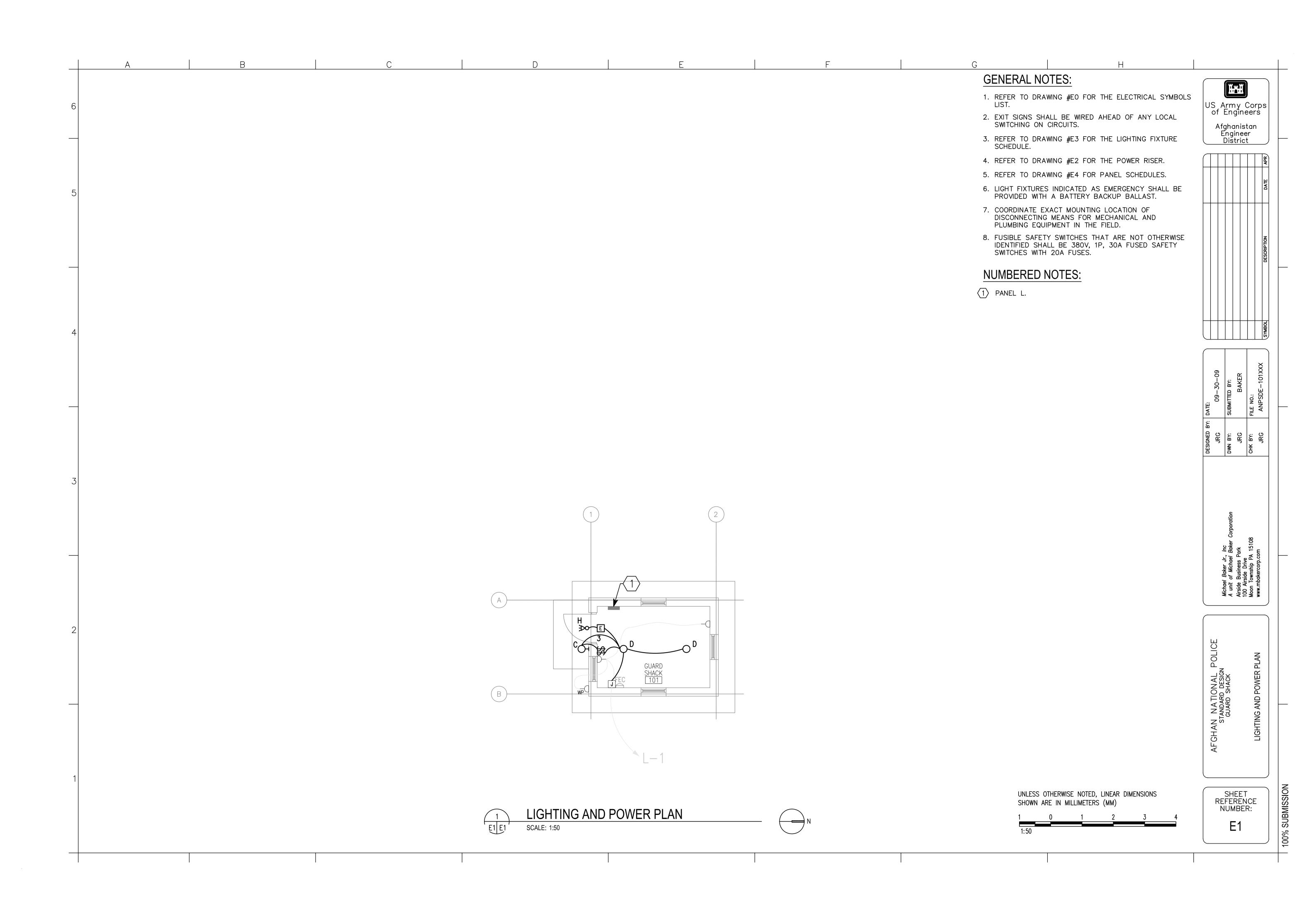


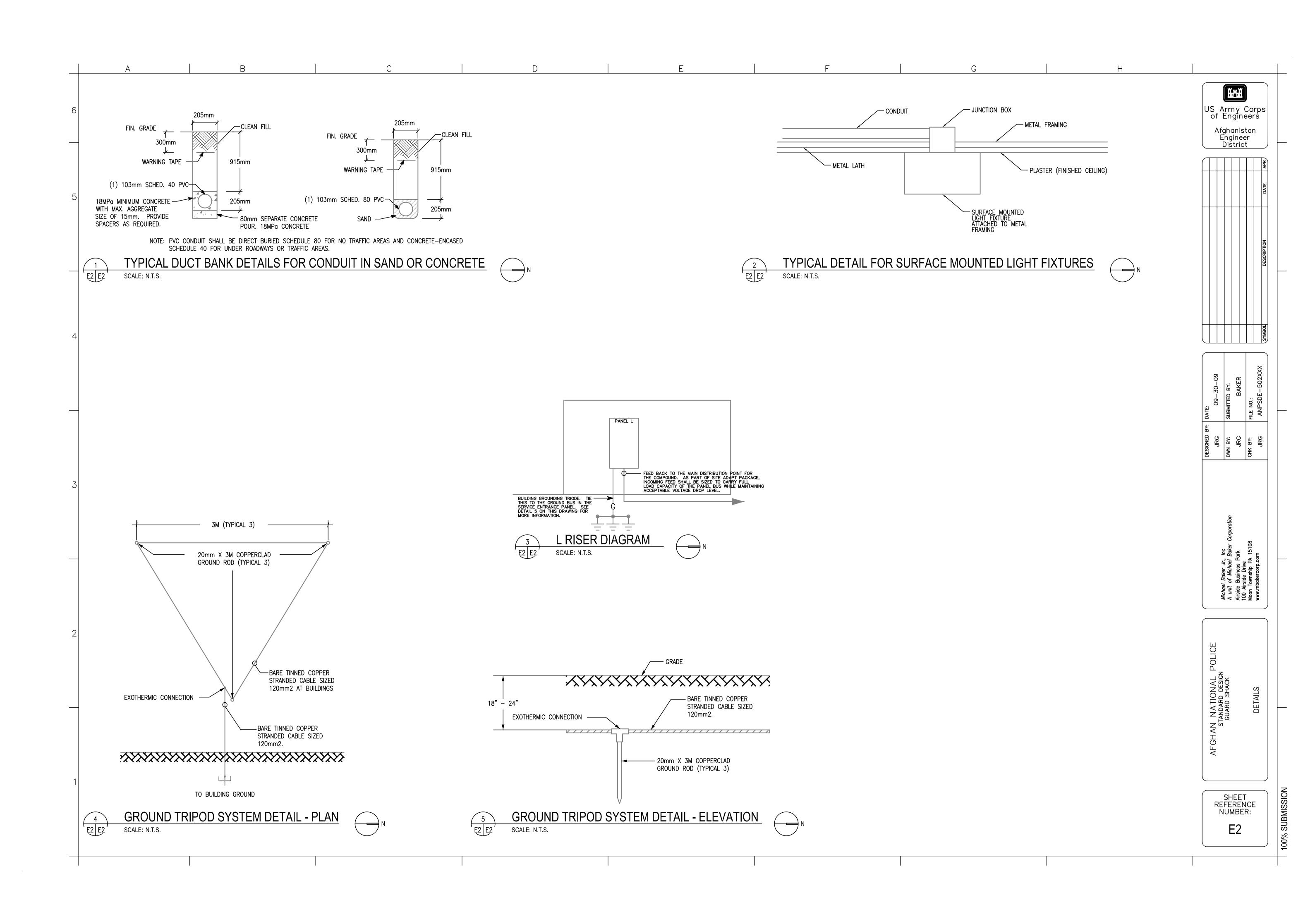














FIXTURE MARK 'C'

INCANDESCENT ONE PIECE WITH APPROVED LENS, STABILIZED HIGH IMPACT POLY CARBONATE

FIXTURE MARK 'D'



SURFACE MOUNTED, SINGLE LAMP 220-240V INCANDESCENT FIXTURE RATED FOR 100W LAMPS. GLASS GLOBE SHALL BE VAPOR TIGHT JELLY JAR TYPE WITH WIRE GUARD. NOMINAL DIMENSIONS ARE 111MMx251MM

FIXTURE MARK 'H'



REMOTE HEAD EXTERIOR LIGHT HEAD POWERED FROM EXIT SIGN BATTERY—12V DOUBLE HEAD CORROSION RESISTANT WITH UL34 WEATHERPROOF CONSTRUCTION

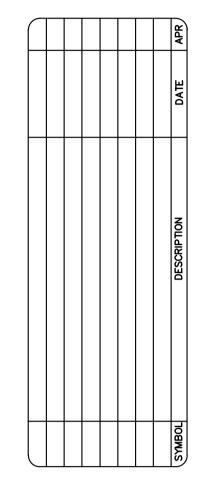
FIXTURE MARK 'E'



UNIVERSAL MOUNT ENGINEER GRADE
THERMOPLASTIC HOUSING EXIT SIGN WITH
LED LAMPS, RED LETTERS 6" IN HEIGHT
WITH ARROWS AS INDICATED, WITH 12V
CADMIUM BATTERY

LIGHTING FIXTURE SCHEDULE											
FIXTURE MARK	STYLE NUMBER AND TYPE	NUMBER AND TYPE OF LAMPS	VOLTAGE	MOUNTING	NOTES						
С	INCANDESCENT ONE PIECE W/ APPROVED LENS STABILIZED HIGH IMPACT POLY CARBONATE.	(1) A19 - 100W INCANDESCENT	220V — 1ø 50HZ	WALL MOUNTED ABOVE EXTERIOR DOORS							
D	SURFACE MOUNTED SINGLE LAMP 220-240V INCANDESCENT FIXTURE RATED FOR 100W LAMPS. GLASS GLOBE SHALL BE VAPOR TIGHT JELLY JAR WITH WIRE GUARD. 111MM-251MM	(1) A21 - 100W COATED INCANDESCENT	220V – 1ø 50HZ	SURFACE MOUNTED FROM ROOF STRUCTURE	MEETS INTERNATIONAL STANDARDS WITH ENCLOSED AND GASKETED RED LENS.						
Н	REMOTE HEAD EXTERIOR LIGHT HEAD POWERED FROM EXIT SIGN BATTERY— 12V DOUBLE HEAD CORROSION RESISTANT WITH UL34 WEATHERPROOF CONSTRUCTION	(2) 12W/12V HALOGEN LAMP	12V — 1ø 50HZ	EXTERIOR WALL MOUNTED AT TOP OF DOOR HEIGHT							
E	UNIVERSAL MOUNT ENGINEER GRADE THERMOPLASTIC HOUSING EXIT SIGN WITH LED LAMPS, RED LETTERS 6" IN HEIGHT WITH ARROWS AS INDICATED, WITH 12V CADMIUM BATTERY WITH REMOTE HEAD CAPABILITY	LED LAMPS	220V – 1ø 50HZ	UNIVERSAL MOUNTING							





DATE:	60-30-60	SUBMITTED BY:	BAKER	FILE NO.:	ANPSDE-603XXX
DESIGNED BY: DATE:	JRG	DWN BY:	JRG	CHK BY:	JRG
	Michael Baker Ir Inc	A unit of Michael Baker Corporation	Airside Business Park 100 Airside Drive	Moon Township PA 15108	www.mbakercorp.com

AFGHAN NATIONAL POLICE
STANDARD DESIGN
GUARD SHACK
LIGHT FIXTURE SCHEDULE

SHEET REFERENCE NUMBER:

 PANELBOARD
 L
 SURFACE
 MOUNTED
 ASYM. A.I.C. MIN.

 _____AMP. MAIN LUGS (OR)
 100
 AMP. MAIN BREAKER W/
 100
 AMP. TRIP

 CIRCUIT BREAKER TYPE
 380/220
 VOLTS
 3
 PHASE
 4
 WIRE
 50
 HZ
 100
 AMP. BUS
 CONDUIT GND WIRE 일 TRIP AMPS 등일 1 20 2 LOAD-V.A. LOAD-V.A. LOAD SERVED LOAD SERVED AØ BØ CØ AØ BØ CØ 1 20 1 4.0 4.0 20 LIGHTING AND RECEPTACLES- 101 1.0 SPARE 1 20 4 3 20 1 SPARE SPARE SPARE SPARE 5 20 1 1 20 6 1 20 8 7 20 1 SPARE SPARE SPARE 9 20 1 SPARE 1 20 10 11 20 1 1 20 12 SPARE SPARE 0.6 0.5 0.0 0.6 0.0 0.0 TOTAL CONN. LOAD PER PHASE (KVA): AØ <u>1.0</u> BØ <u>0.0</u> CØ <u>0.0</u> TOTAL CONN. LOAD 1.0 KVA. 70 % DEMAND = ESTIMATED DEMAND LOAD 0.7 SUPPLIED FROM MAIN SWITCHGEAR DISTRIBUTION

* MAIN BREAKER SHALL BE 3P EARTH GROUND TYPE

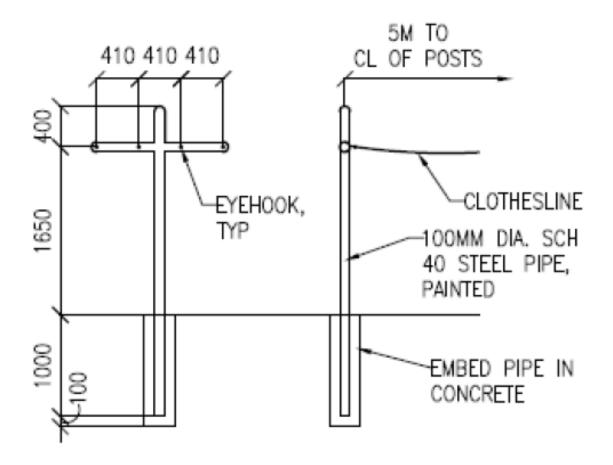


				APR
				DATE
				DESCRIPTION
				SYMBOL

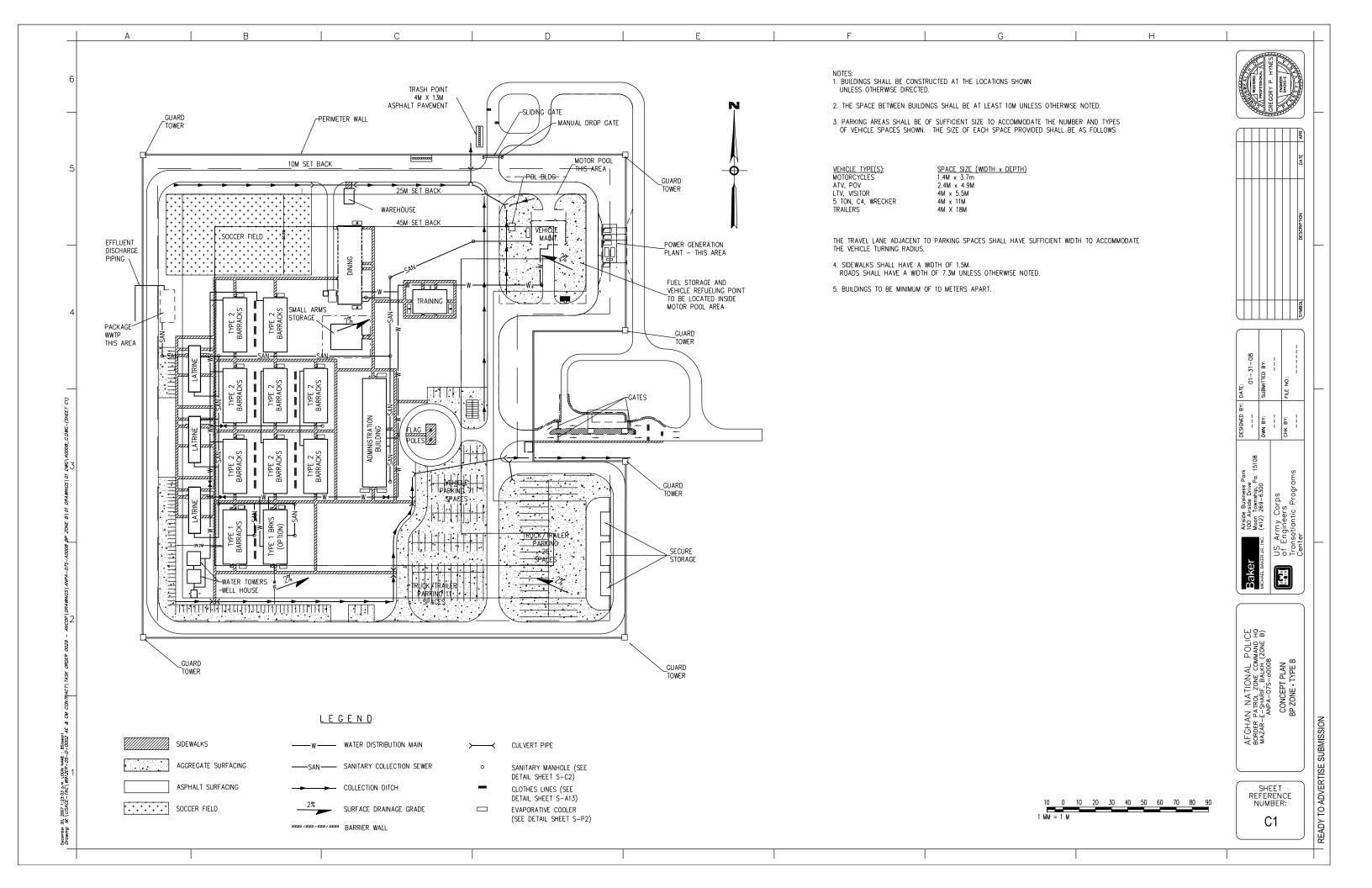
ANPSDE-6	JRG	www.mbakercorp.com
FILE NO.:	CHK BY:	Moon Township PA 15108
BAK	JRG	Airside Business Park 100 Airside Drive
SUBMITTED BY	DWN BY:	A unit of Michael Baker Corporation
09-30	JRG	Michael Raber Ir Inc
DATE:	DESIGNED BY: DATE:	

AFGHAN NATIONAL POLICE STANDARD DESIGN GUARD SHACK PANEL SCHEDULES AND RISER DIAGRAM

SHEET REFERENCE NUMBER:



CLOTHESLINE - NTS



AFGHAN NATIONAL ARMY

STANDARD BUILDING DESIGN FUEL OPERATORS BUILDING

100% FINAL DESIGN SUBMITTAL

SHEET INDEX

G-001	COVER SHEET						
STRUCTURAL		ARCHITECTU	IRAL	<u>MECHANICAL</u>	<u>L</u>	ELECTRICAL	
S-001 S-101 S-401 S-501 S-601 S-701 S-801	GENERAL NOTES & DESIGN CRITERIA FOUNDATION/SLAB & ROOF FRAMING PLANS BUILDING SECTIONS SECTIONS SCHEDULES TYPICAL DETAILS PLANS & DETAILS & SHEAR WALL ELEVATIONS	A-001 A-101 A-401 A-501 A-502 A-503 A-601	LIFE SAFETY PLAN FLOOR PLAN, ROOF PLAN & ELEVATIONS WALL SECTIONS EXTERIOR DETAILS HEAD, JAMB, & SILL DETAILS STOOP DETAILS WINDOW & DOOR SCHEDULES	M-101	FLOOR PLAN-HVAC SCHEDULES & DETAILS	E-001 E-101 E-501 E-502 E-601 E-602	ELECTRICAL SYMBOLS & ABBREVIATIONS ELECTRICAL LIGHTING, POWER & SYSTEMS PLAN ELECTRICAL DETAILS ELECTRICAL DETAILS ELECTRICAL LIGHT FIXTURE SCHEDULE ELECTRICAL PANEL SCHEDULES



			Appr.
			Date
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ACCHANISTAN ENCINEED DISTRICT	KMP/MMY		3/07/2010	0	
AFGITANISTAN ENGINEEN DISTRICT	Dwn by:	Ckd by:	Design file no.		
APO AE 96338	RCG CWW	CWW			
el Baker Jr., Inc	Reviewed by:		Drawing code:		
t of Michael Baker Corporation	WHJ				
Business Park	Submitted by:		File name: ANAFOBG-001	G-001	
rside Urive Townshin DA 15108	•		Plot date: 3/5/2010		
Ibakercorp.com	BAKER		Plot scale: X:X		≥
)

reference number: G-001

CONCRETE SHALL HAVE THE UNIT WEIGHT OF 2400 kg/m3 AND A MINIMUM COMPRESSIVE STRENGTH (f'c) OF 28 MPa AT 28 DAYS. ALL CONCRETE SHALL HAVE A WATER-CEMENT RATIO OF 0.45. SEE SPECIFICATIONS FOR 5.1 ADDITIONAL INFORMATION. ENTRAIN AIR TO PRODUCE TOTAL AIR CONTENT ACCORDING TO THE SPECIFICATIONS FOR CONCRETE EXPOSED TO FREEZING TEMPERATURES (EXTERIOR FOOTINGS, SLAB TURNDOWNS, EXTERIOR SLABS 5.2 AND SLABS-ON-GRADE, EXTERIOR RETAINING WALLS, AND 3.2 NO CALCIUM CHLORIDE SHALL BE USED IN ANY 3.3 MIXING, TRANSPORTING AND PLACING OF CONCRETE SHALL 3.4 ALL CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF THE AMERICAN CONCRETE INSTITUTE (ACI) 318M MANUAL (metric), "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE", AND REQUIREMENTS OUTLINED IN THE CONTRACT SPECIFICATIONS. WHEN THERE IS A CONFLICT BETWEEN ACI AND THE SPECIFICATIONS, THE MORE STRINGENT 3.5 CHAMFER ALL EXPOSED EXTERNAL CORNERS OF CONCRETE WITH 20mm x45 DEGREE CHAMFER UON. 3.6 CONCRETE REINFORCEMENT BARS SHALL CONFORM TO ASTM A615M-96a, GRADE 420 MPa, REINFORCING BARS SHALL NOT BE TACK WELDED, WELDED, HEATED OR CUT, UNLESS INDICATED ON THE CONTRACT DOCUMENTS. ALL LAP SPLICES SHALL BE CLASS "B" UON. 3.7 HORIZONTAL FOOTING AND HORIZONTAL WALL REINFORCEMENT SHALL BE CONTINUOUS AND SHALL HAVE 5.6 INSTALL FRAMING MEMBERS IN ONE-PIECE LENGTHS UNLESS 90 DEGREE BENDS AND EXTENSIONS, OR CORNER BARS OF EQUIVALENT SIZE LAPPED WITH A CLASS B TENSION SPLICE AT CORNERS AND INTERSECTIONS. TOP BAR CRITERIA SHALL APPLY IF 300mm OR MORE OF FRESH 3.8 SLABS-ON-GRADE SHALL HAVE CONSTRUCTION JOINTS OR CRACK CONTROL JOINTS AS SHOWN ON THE DRAWINGS. CONSTRUCTION JOINTS CAN BE USED AT CONTROL JOINT LOCATIONS AT CONTRACTORS OPTION. SEE SLAB PLANS & JOINT DETAILS FOR ADDITIONAL INFORMATION. FOR AREAS NOT SHOWN ON DWGS, THE MAXIMUM SPACING OF CONSTRUCTION/ CRACK CONTROL JOINTS SHALL BE 3.9 ALL CONCRETE REINFORCEMENT SHALL BE DETAILED FABRICATED, LABELED, SUPPORTED, AND SPACED IN FORMS AND SECURED IN PLACE IN ACCORDANCE WITH THE PROCEDURES AND REQUIREMENTS OUTLINED IN THE LATEST EDITION OF THE "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE", ACI 318M, AND THE "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES", ACI 315M, LATEST EDITION. BASED ON IN COUNTRY REINFORCEMENT AVAILABILITY, IT IS THE CONTRACTOR'S OPTION TO ROUND DESIGNATED ODD NUMBERED REINFORCEMENT SIZES UP 3.10 ALL DOWELS SHALL MATCH SIZE AND NUMBER OF MAIN REINFORCING, UNLESS NOTED OTHERWISE ON THE SHEETS 3.11 ADDITIONAL BARS SHALL BE PROVIDED AROUND ALL FLOOR AND WALL OPENINGS AS SHOWN ON THE SHEETS. 3.12 SEE ARCHITECTURAL SHEETS FOR TYPE AND LOCATION OF 3.13 THE CONTRACTOR SHALL COORDINATE ADDITIONAL WALL/SLAB OPENINGS NOT SHOWN ON STRUCTURAL SHEETS. SEE MECHANICAL, ELECTRICAL, PLUMBING AND 3.14 UNLESS NOTED OTHERWISE, ALL CURBS SHALL BE REINFORCED WITH AT LEAST (1)-#13 CONTINUOUS AND #13 AT 300mm O.C. DOWELS TO STRUCTURE BELOW. 3.15 THE CONTRACTOR SHALL VERIFY ALL OPENINGS, PAD SIZES, AND ANCHOR BOLTS WITH EQUIPMENT SELECTED 3.16 FOR ALL WALLS & PIERS, PROVIDE DOWELS INTO FOOTING AT EACH VERT REINF BAR, UON DOWEL SIZE SHALL BE 3.17 PROVIDE CONCRETE POUR STOPS OR FORMED AS REQUIRED FOR INSTALLATION OF ALL CONCRETE WORK 3.18 PROVIDE ADDITIONAL $(2)-\#13 \times 600$ mm REINFORCING BARS IN SLAB-ON GRADE AT ALL RE-ENTRANT CORNERS PLACE BARS AT MID-DEPTH OF SLAB WITH A CLEARANCE 3.19 COLD-WEATHER PLACEMENT: COMPLY WITH ACI 306.1 AND AS FOLLOWS. PROTECT CONCRETE WORK FROM PHYSICAL DAMAGE OR REDUCED STRENGTH THAT COULD BE CAUSED BY FROST, FREEZING ACTIONS, OR LOW TEMPERATURES. SUBMIT A COLD WEATHER CONCRETING PLAN FOR 3.20 PROVIDE BONDING COMPOUND PER ASTM C 1059-99: SPECIFICATION FOR LATEX AGENTS FOR BONDING FRESH CONCRETE (GROUT) TO HARDENED CONCRETE. 3.21 THE FORMED SURFACES FOR REINFORCED CONCRETE SHALL ACHIEVE A "CLASS A" FINISH WHEN RECEIVING PAINT OR A "CLASS B" FINISH WHEN RECEIVING PLASTER OR TILE AS PER SPECIFICATION SECTION 03 31 00

6.0 STRUCTURAL DESIGN CRITERIA 4.0 CONCRETE MASONRY (NOT USED) 6.1 ALL DESIGNS SHALL CONFORM TO THE PROVISIONS OF THE IBC 2006 AND UFC AS APPLICABLE 5.0 COLD-FORMED METAL FRAMING 6.2 DESIGN LOADS ALL COLD-FORMED METAL FRAMING MEMBERS SHALL CONFORM TO ASTM A1003M, STRUCTURAL GRADE ST340 6.2.1 <u>DEAD LOADS</u> (PER IBC 2006 & UFC 3-310-01) 0.20 kPa (MPa), WITH A GALVANIZED COATING OF Z275 OR BETTER IN MECH/ELEC/PLUMBING ACCORDANCE WITH ASTM A653M. MISCELLANEOUS 0.15 kPa ALL COLD-FORMED METAL FRAMING MEMBERS SHALL HAVE COLD-FORMED FRAMING 0.20 kPa THE FOLLOWING MINIMUM PROPERTIES: INSULATION 0.10 kPa MINIMUM METAL THICKNESS 0.14 kPa METAL ROOF PANEL TRACK = 1.37mm;0.79 kPa STUD/OTHER = 1.09mmFLOOR PARTITION ALLOWANCE 0.96 kPa MINIMUM FLANGE WIDTH: TRACK = 38mm; (PER IBC 2006 & UFC 3-310-01) 6.2.2 LIVE LOADS STUD/OTHER = 35mmROOF 1.00 kPa MINIMUM MEMBER DEPTH SLAB ON GRADE 4.80 kPa ALL SECTIONS = 152.2mm PURLIN (HAT CHANNEL 6.2.3 <u>SNOW LOADS</u> (PER IBC 2006 & UFC 3-310-01) DEPTH \times WIDTH(FLAT TOP) \times THICK = 25mm \times 42mm \times 1.59mm GROUND SNOW LOAD (Pg) 1.2 kPa ALL CONNECTIONS SHALL BE MADE WITH CORROSION SNOW IMPORTANCE FACTOR (I) 1.0 RESISTANT (ASTM A153M), SELF-DRILLING, SELF-TAPPING STEEL DRILL SCREWS IN ACCORDANCE WITH ASTM C1513. 1.0 SNOW EXPOSURE FACTOR (Ce) SCREWS SHALL HAVE A LOW PROFILE HEAD BENEATH ROOF 1.0 THERMAL FACTOR (Ct) DECK, AND STANDARD HEAD ALL OTHER LOCATIONS 5.4 FABRICATE COLD FORMED METAL FRAMING AND ACCESSORIES 6.2.4 <u>WIND LOADS</u> (PER IBC 2006) PLUMB, SQUARE AND TRUE TO LINE, WITH CONNECTIONS BASIC WIND SPEED 137 km/h SECURELY FASTENED ACCORDING TO AISI STANDARD FOR WIND IMPORTANCE FACTOR 1.0 COLD FORMED STEEL FRAMING. WIND EXPOSURE CATEGORY 5.5 CUT FRAMING MEMBERS BY SAWING OR SHEATHING, DO NOT 0.85 DIRECTIONALITY COEFFICIENT (Kd) TORCH CUT TOPOGRAPHIC FACTOR (Kzt) 1.0 SPLICE CONNECTIONS ARE INDICATED FOR TRACK OR TENSION 6.2.5 <u>SEISMIC LOADS</u> (PER IBC 2006 & UFC 3-310-04) **MEMBERS** OCCUPANCY USE CATEGORY 5.7 INSTALL TEMPORARY BRACING AND SUPPORTS TO SECURE SEISMIC IMPORTANCE FACTOR (Ie) 1.0 FRAMING DURING CONSTRUCTION. MAINTAIN BRACING AND SEISMIC SITE CLASS SUPPORTS IN PLACE UNTIL THE STRUCTURE HAS BEEN COMPLETED WITH ALL CONNECTIONS AND PERMANENT BRACING $S_s = 1.5$ (REDUCED FROM 2.4 PER ASCE SECURED. 7-05 CH 12.8.1.13) $S_1 = 1.20$

 $S_{DS} = 1.0$

 $S_{D1} = 1.20$

SEISMIC DESIGN CATEGORY

SEISMIC RESISTING SYSTEM:

RESPONSE COEFFICIENT (Cs)

SEISMIC BASE SHEAR

-BEARING WALL SYSTEM:

RESPONSE MODIFICATION FACTOR (R)

SEISMIC ANALYTICAL PROCEDURE =

SPECIAL REINFORCED CONCRETE SHEAR WALLS

HAH

US ARMY CORPS

OF ENGINEERS

ENGINEER DISTRICT

AFGHANISTAN

File Plot OF INE 363

ONAL ARM TRAINING DESIGN

0.167

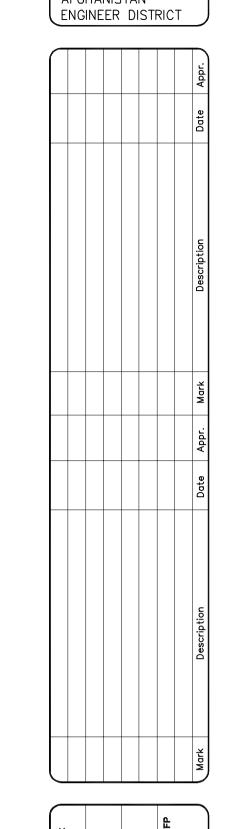
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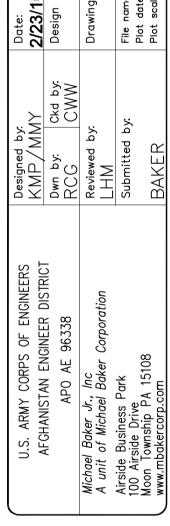
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Sheet reference number: S - 00

APPROVED: A/E DESIGNER OF RECORD SEAL:

No. 27141





AFGHAN NATIONAL ARMY ONAL MILITARY TRAINING CEN-STANDARD DESIGN

Sheet reference number:

S - 101



- 1. REFER TO SHEET S-001 FOR STRUCTURAL NOTES AND DESIGN CRITERIA.
- 2. FINISH FIRST FLOOR ELEVATION SHALL BE (DATUM 0.00) ALL PLUS OR MINUS DIMENSIONS INDICATED ON PLAN OR REFERRED TO IN NOTES RELATE TO FINISH FLOOR ELEVATION.
- 3. SLAB-ON-GRADE IS 150 WITH #13 @ 300 OC EW LOCATED 38 FROM T/SLAB.
- 4. BOTTOM OF WALL FOOTINGS SHALL BE -950 UNLESS OTHERWISE INDICATED.
- 5. WALL FOOTING INDICATED BY WF# ON PLAN. REFER TO FOOTING SCHEDULE ON S-601.
- 6. CONCRETE SHEAR WALL INDICATED BY SW#. REFER TO CONCRETE SHEAR WALL SCHEDULE ON S-601.
- 7. SEE MECHANICAL AND ELECTRICAL SHEETS FOR CONCRETE PAD LOCATIONS, SIZES, AND THICKNESS NOT SHOWN. SEE SHEET S-701 FOR DETAILS.

FOUNDATION/SLAB PLAN KEY NOTES: (x)

- 1. CONC PAD (ENTRANCE)—SEE ARCH DWGS
- FOR INFORMATION
- 2. REINF CONC SLAB-ON-GRADE

FOUNDATION/SLAB PLAN LEGEND:

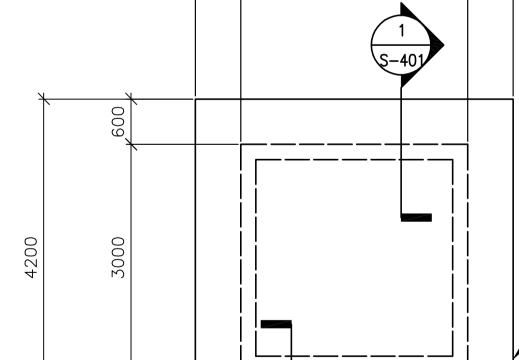
REINF CONC SHEAR WALL

ROOF FRAMING PLAN NOTES:

- 1. REFER TO SHEETS S-001 FOR STRUCTURAL NOTES AND DESIGN CRITERIA.
- 2. TOP OF SLAB ELEVATION = 2800 UNLESS NOTED OTHERWISE.
- 3. ROOF SLAB IS 200 WITH #13 @ 300 OC EW T&B.4. COORDINATE WITH ARCHITECTURAL SHEETS FOR COLD-FORMED STEEL OVERBUILD FRAMING ABOVE
- 5. COLD-FORMED METAL OVERBUILD ROOF FRAMING NOT SHOWN FOR CLARITY. SEE OVERBUILD ROOF FRAMING DETAILS AND SECTIONS ON SHEET S-701.
- 6. OVERHANG AREAS OF ROOF SLAB CONTAIN ROOF VENT PENETRATIONS. REFERENCE ARCHITECTURAL DRAWINGS FOR INFORMATION.

ROOF FRAMING PLAN KEY NOTES: (X)

1. CONC ROOF SLAB (BELOW ROOF OVERBUILD)



D

S-501

S-101/

WF1

3000

4200

3000

SCALE: 1:50

FOUNDATION/SLAB PLAN





UNLESS OTHERWISE NOTED, LINEAR DIMENSIONS SHOWN ON DRAWINGS ARE IN MILLIMETERS (mm)



SEAL: .



COLD-FORMED METAL — ROOF OVERFRAMING

— CONCRETE SLAB ON GRADE SEE

THICKNESS & REINF

- CONTINUOUS WALL

FOOTING SEE SCHEDULE ON S-601

- CAPILLARY WATER BARRIER WITH VAPOR RETARDER

PLAN FOR

TYPICAL WALL SECTION AT EXTERIOR WALL

METAL ROOF PANEL, — SEE ARCH DWGS

TOP OF ROOF SLAB

CONC ROOF SLAB —— SEE PLAN FOR THICKNESS & REINF

CONCRETE SHEAR -

FINISH GRADE —

CONC SLAB \rightarrow ELEV = 0.00

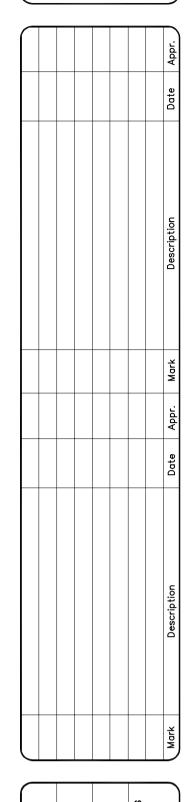
B/FOOTING $\sum ELEV = -950$

S-101

SCALE: 1:20

WALL. SEE SCHEDULE
ON S-601 FOR
REINFORCEMENT.





ORPS OF ENGINEERS	Designed by: KMP/MMY	Date: 2/23/10	Rev:
IN ENGINEER DISTRICT O AE 96338	Dwn by: Ckd by: RCG CWW	Design file no.	
nc 3aker Corporation	Reviewed by: LHM	Drawing code:	
¥	Submitted by:	File name: ANAFOBS-401BS	3-401BS
15108 n	BAKER	Plot date: 2/23/2010 Plot scale: X:X	

AFGHAN NATIONAL ARMY ONAL MILITARY TRAINING CENTER STANDARD DESIGN

Sheet

reference number:

S - 401

UNLESS OTHERWISE NOTED, LINEAR DIMENSIONS SHOWN ON DRAWINGS ARE IN MILLIMETERS (mm)

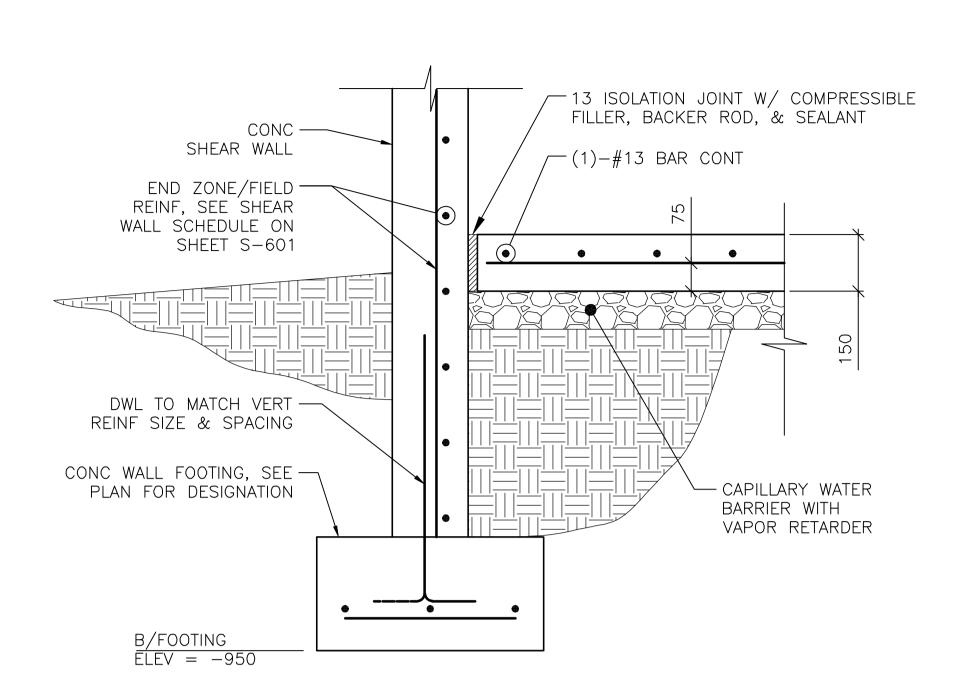
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AVE DESIGNER OF RECORD

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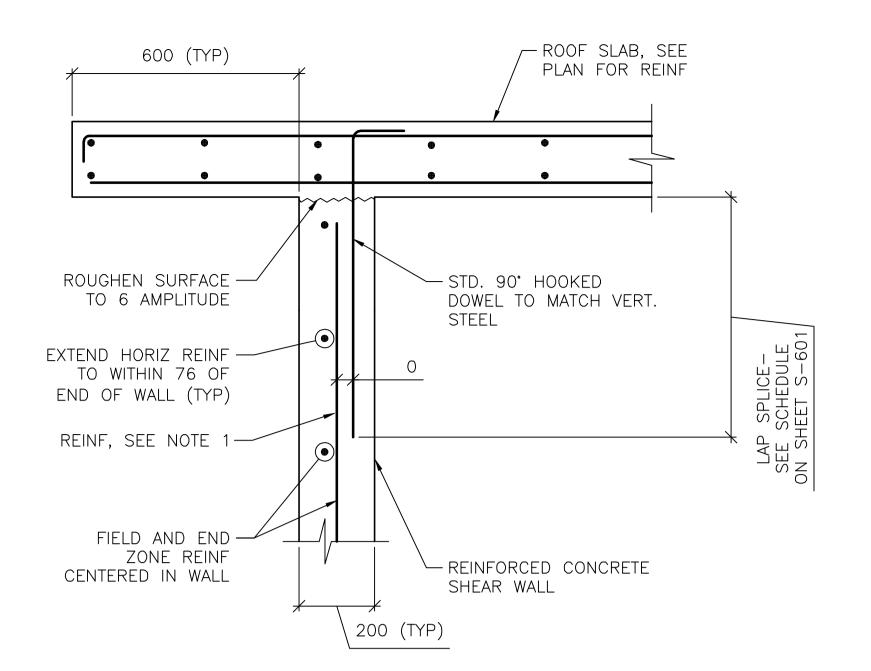


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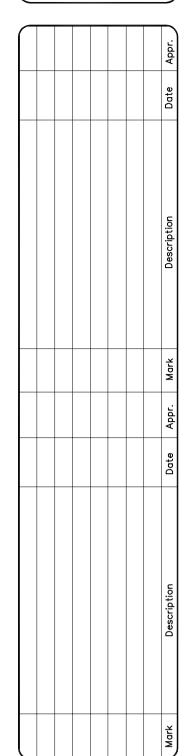




- 1. TERMINATE "FIELD" VERT REINF & END ZONE REINF @
- 50 CLEAR FROM TOP OF ROOF SLAB. 2. SEE SHEET S-601 FOR SCHEDULED FIELD AND END ZONE REINF.







U.S. ARMY CORPS OF ENGINEERS	Designed by:	Date: 2/23/10	Rev:
AFGHANISTAN ENGINEER DISTRICT APO AE 96338	Dwn by: Ckd by: CWW	Design file no.	
el Baker Jr., Inc it of Michael Baker Corporation	Reviewed by:	Drawing code:	
e Business Park irside Drive	Submitted by:	File name: ANAFOBS-501SC Plot date: 2/23/2010	BS-501SC 10
Iownsnip PA 13108 nbakercorp.com	BAKER	Plot scale: X:X	

AFGHAN NATIONAL ARMY ONAL MILITARY TRAINING CENTER STANDARD DESIGN

UNLESS OTHERWISE NOTED, LINEAR DIMENSIONS SHOWN ON DRAWINGS ARE IN MILLIMETERS (mm)





Sheet reference number: S - 501

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RPS OF ENGINEERS	Designed by: KMP/MMY	Date: Rev: 2/23/10
engineer district AE 96338	Dwn by: Ckd by: RCG CWW	Design file no.
cer Corporation	Reviewed by: LHM	Drawing code:
	Submitted by:	File name: ANAFOBS-601SCH
108	BAKER	Plot scale: X:X

CONCRETE SHEAR WALL SCHEDULE

		WALL	WALL REINF	FORCEMENT	REMARKS
MARK	TYPE	LENGTH (L) (mm)	END ZONE (EACH END)	FIELD	NEWANNS
SW1	E	1100	(2)-#13 @ 100mm OC	#13 @ 300mm OC	(2) SHEAR WALL SECTIONS OF 1100mm IN LENGTH PER (1) TYPE E SHEAR WALL DETAIL

- 1. WORK THIS SCHEDULE WITH SHEAR WALL DETAILS ON SHEETS S-701
- 2. SEE PLAN FOR LOCATION OF SHEAR WALL(S).
- 3. WALL "FIELD" REINFORCEMENT LISTED APPLIES TO VERTICAL & HORIZONTAL BARS.
- 4. WALL "FIELD" REINFORCEMENT SHOULD BE CENTERED IN WALL.

5. VERTICAL "FIELD" BARS MAY BE OMITTED IN LOCATION OF "END ZONE" REINFORCEMENT.

REQUIREMENTS GIVEN HERE. DIMENSIONS ARE IN mm. PROVIDE STANDARD BAR CHAIRS AND SUPPORT BARS @1200mm MAXIMUM AS REQUIRED TO MAINTAIN CONCRETE PROTECTION SPECIFIED. FOOTINGS (EARTH FORMED): 70 COLUMNS / PIERS (TO TIES) GRADE BEAMS OR SLAB TURNED DOWN EDGES: 40 70 BOTTOM (EARTH FORMED) SIDES (EARTH FORMED) 70 #16 BAR & SMALLER 40 SIDES (BOARD FORMED) 50 #19 THRU #36 BAR ELEVATED BEAMS & SLABS: 40 BEAM TIES & STIRRUPS (NOT EXPOSED TO WEATHER) BEAM TIES & STIRRUPS (EXPOSED TO WEATHER) 50 FLOOR SLABS (NOT EXPOSED TO WEATHER) 20 FLOOR SLABS (EXPOSED TO WEATHER) 50 #19 & LARGER 40 #13 & SMALLER ROOF"SLAB BARS 25 SLABS ON GRADE NOT EXPOSED TO WEATHER (FROM TOP) 20 EXPOSED TO WEATHER (FROM TOP) UTILITY TUNNEL WALLS, RETAINING WALLS AND SHEAR WALLS. (NO SURFACES SHALL BE EARTH FORMED) EARTH SIDE AND FRONT SIDE (EXPOSED TO WEATHER)

#16 BAR AND SMALLER

#19 THRU #36 BAR

40

50

CONCRETE COVER SCHEDULE

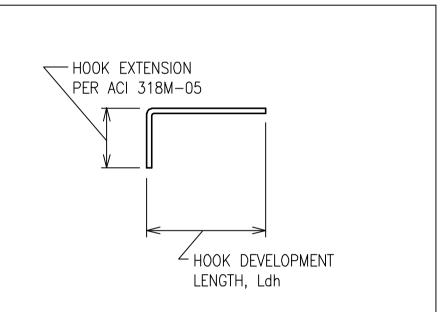
MINIMUM CONCRETE COVER PROTECTION FOR REINFORCEMENT BARS SHALL BE AS LISTED BELOW: (SEE ACI 318M-05, SECTION 7.7 FOR CONDITIONS NOT NOTED). DIMENSIONS FOR BAR PLACEMENT GIVEN IN

SECTIONS AND DETAILS SHALL SUPERSEDE MINIMUM COVER

STANDARD HOOKS IN TENSION PER (ACI 318M - 05)

HOOK DEVELOPMENT LENGTH

(mm)	
BAR SIZE	f'c 28 MPa
#10	180
#13	250
#16	300
#19	380
#22	430
#25	480
#29	560
#32	610
#36	690



1. CONCRETE IS NORMAL WEIGHT CONCRETE. 2. BAR YIELD STRENGTH, fy = 420 MPa SIDE COVER REQUIREMENTS OF ACI SECT.

12.5.3 ARE ASSUMED TO NOT BE MET. 4. TIE OR STIRRUP REQUIREMENTS OF ACI SECT. 12.5.3 ARE ASSUMED TO NOT BE MET.

5. REDUCTION FOR EXCESS REINFORCEMENT IS NOT TAKEN. 6. HOOK DEVELOPMENT LENGTH IS VALID FOR

		WALL	FOOTI	NG SCH	HEDULE	
MARK	FOO	OTING SIZE	(mm)	FOOTING RI	EINFORCING	REMARKS
MARK	LENGTH	WIDTH	THICKNESS	LONGITUDINAL	TRANSVERSE	REMARKS
WF1		600	300	(4)-#19	#13 @ 450mm	

180° HOOKS ALSO.

UNLESS OTHERWISE NOTED, LINEAR DIMENSIONS SHOWN ARE IN MILLIMETERS (mm)





UNCOATED BARS f'c = 28 MPa TOP BARS OTHER BARS LAP CLASS BAR SIZES CASE 1 CASE 2 CASE 1 CASE 2 50 BAR DIA 74 BAR DIA 38 BAR DIA 57 BAR DIA #10 TO #19

CONCRETE REINFORCEMENT TENSION

DEVELOPMENT/LAP SPLICE SCHEDULE

64 BAR DIA 96 BAR DIA 50 BAR DIA 74 BAR DIA 62 BAR DIA 93 BAR DIA 48 BAR DIA 71 BAR DIA #22 TO #57 121 BAR DIA 62 BAR DIA 93 BAR DIA 80 BAR DIA

- 1. TABULATED TENSION DEVELOPMENT LENGTH VALUES ARE TAKEN FROM CRSI DESIGN HANDBOOK 2008 10TH ED.
- 2. TENSION DEVELOPMENT & TENSION LAP SPLICE LENGTHS ARE EXPRESSED AS MULTIPLES OF BAR DIAMETERS.
- 3. TABULATED VALUES ARE BASED ON MINIMUM YIELD STRENGTH OF REINFORCEMENT, fy, OF 420MPa.
- 4. CONCRETE IS NORMAL WEIGHT (2400Kg/m³) AND 28 DAY COMPRESSIVE STRENGTH = 28MPa.
- 5. TABULATED VALUES FOR BEAMS & COLUMNS ARE BASED ON TRANSVERSE REINFORCEMENT AND CONCRETE COVER MEETING MINIMUM CODE REQUIREMENTS.
- 6. CASES 1 & 2, WHICH DEPEND ON THE TYPE OF STRUCTURAL MEMBER, CONCRETE COVER, AND CENTER-TO-CENTER SPACING OF THE BARS ARE DEFINED IN THE TABLE BELOW.
- 7. LAP SPLICE LENGTHS (MINIMUM 300mm) ARE MULTIPLES OF TENSION DEVELOPMENT LENGTHS: CLASS A = 1.0(TENSION DEVELOPMENT LENGTH) & CLASS B = 1.3(TENSION DEVELOPMENT LENGTH)
- 8. TOP BARS ARE HORIZONTAL REINFORCEMENT WITH MORE THAN 300mm OF CONCRETE CAST BELOW THE BARS.
- 9. IT SHALL BE PERMISSIBLE TO CALCULATE WALL AND SLAB REINFORCEMENT TENSION DEVELOPMENT/SPLICE LENGTHS IN ACCORDANCE WITH ACI 12.2.3 OR TABLE 5.3(b) OF CRSI 2008 IN LIEU OF VALUES TABULATED ABOVE.

BEAMS, COLUMNS	CASE 1	CONCRETE COVER AT LEAST 1 BAR DIA AND CENTER—TO—CENTER SPACING AT LEAST 2 BAR DIA
·	CASE 2	CONCRETE COVER LESS THAN 1 BAR DIA OR CENTER-TO-CENTER SPACING LESS THAN 2 BAR DIA
ALL OTHERS	CASE 1	CONCRETE COVER AT LEAST 1 BAR DIA AND CENTER—TO—CENTER SPACING AT LEAST 3 BAR DIA
ALL SHIENS	CASE 2	CONCRETE COVER LESS THAN 1 BAR DIA OR CENTER—TO—CENTER SPACING LESS THAN 3 BAR DIA

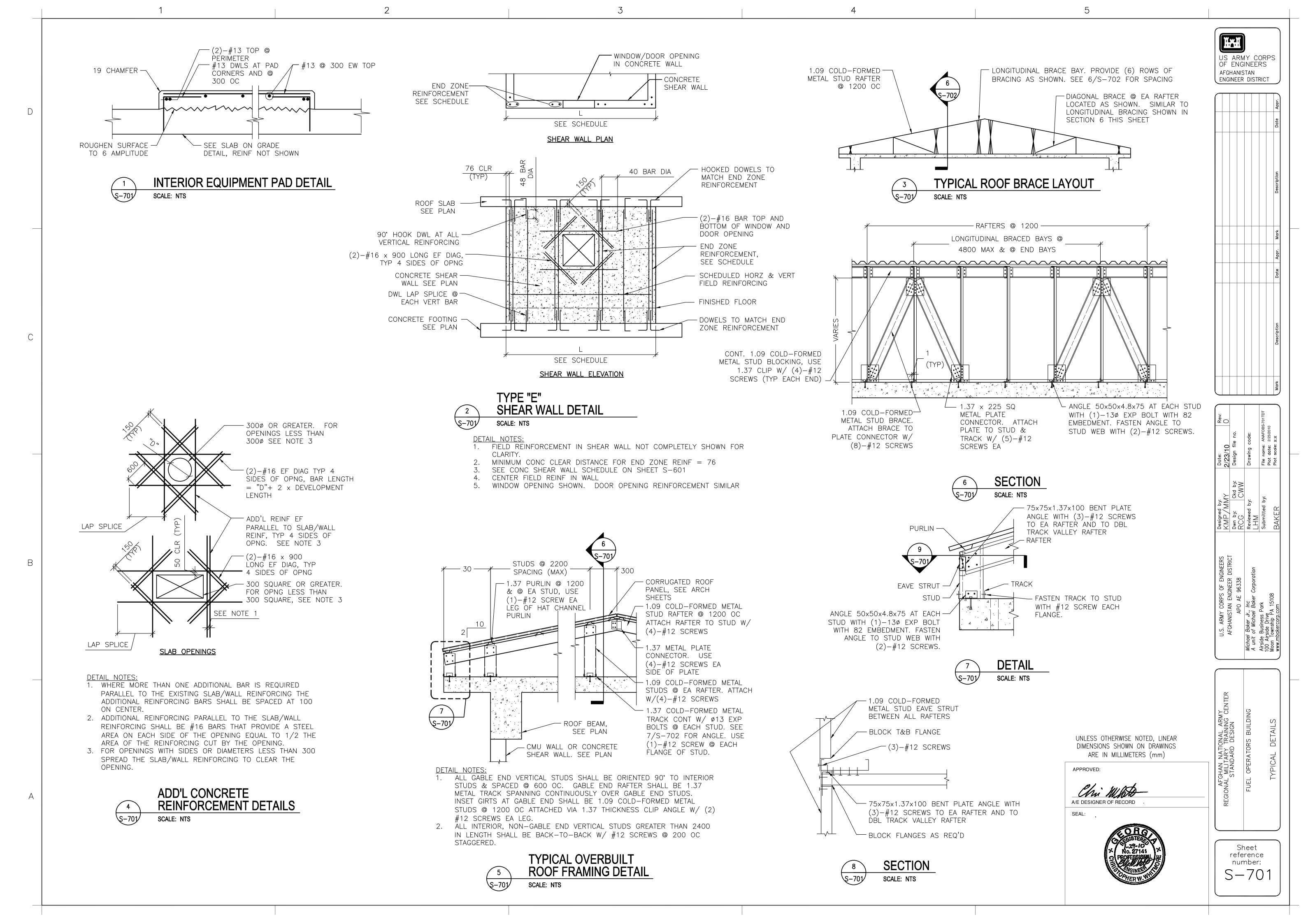


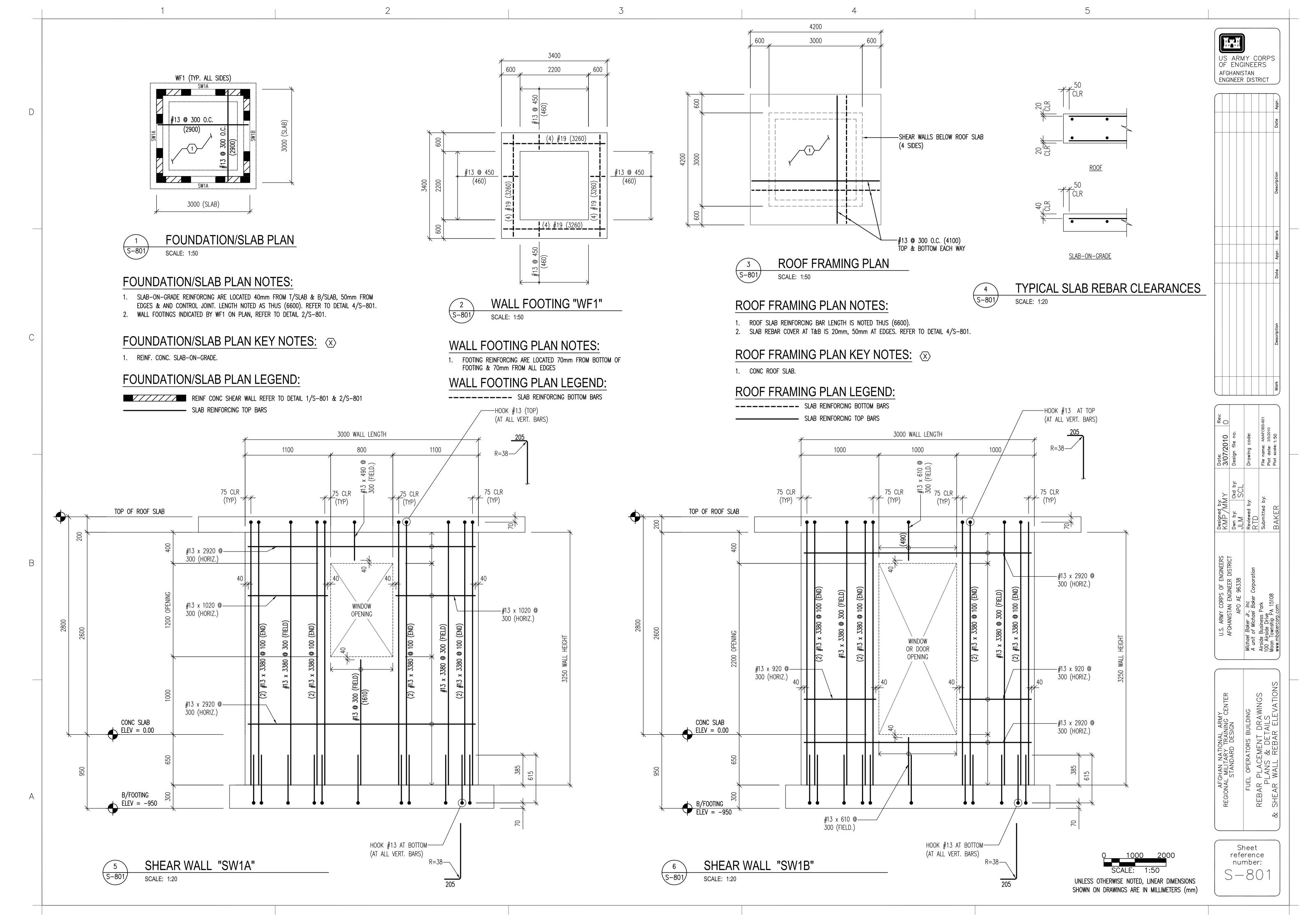
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HAN NATIONAL ARMY MILITARY TRAINING CENTER STANDARD DESIGN





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SCALE: 1:50

FLOOR PLAN

CODE ANALYSIS:

- **REFERENCES:** 2006 INTERNATIONAL BUILDING CODE (2006 IBC) 2006 LIFE SAFETY CODE (2006 NFPA 101)
- 2. <u>IBC OCCUPANCY CLASSIFICATION:</u> GROUP B (BUSINESS NFPA 101 6.1.11 AND CHAPTER 38)
- 3. TYPE OF CONSTRUCTION (IBC): TYPE II-B (UNPROTECTED/NONSPRINKLERED)
- 4. IBC TABLE 503: ALLOWABLE HEIGHT AND BUILDING AREAS: <u>GROUP B</u>

ALLOWABLE AREA: 2,137 SM ALLOWABLE HEIGHT: 3 STORIES (16 M)

PROPOSED AREA: 12 SM PROPOSED HEIGHT: 1 STORY (<16 M)

5. <u>IBC TABLE 601 & 602:</u> FIRE RESISTANCE RATING REQUIREMENTS FOR BUILDING ELEMENTS FOR TYPE II-B

<u>REFERENCE</u> BUILDING ELEMENT RATING (HOUR) STRUCTURAL FRAME (COLUMNS, GIRDERS & TRUSSES) TABLE 601 BEARING WALLS EXTERIOR TABLE 601 INTERIOR TABLE 601 NONBEARING WALLS & PARTITIONS INTERIOR TABLE 601 FLOOR CONSTRUCTION TABLE 601 ROOF CONSTRUCTION TABLE 601 0 TABLE 602 EXTERIOR WALL 0

IBC TABLE 803.5 - INTERIOR WALL AND CEILING FINISH REQUIREMENTS FOR B OCCUPANCY/NONSPRINKLERED

ROOMS AND ENCLOSED SPACES EXIT ENCLOSURES AND EXIT PASSAGEWAY

7. NFPA 101 TABLE 7.3.1.2 — OCCUPANT LOAD BUSINESS = 9.3 SM/PERSON BUSINESS PROPOSED = 2 OCCUPANTS

8. NFPA 101 TABLE 7.3.3.1 - EGRESS CAPACITY BUSINESS = 5 MM PER OCCUPANT

REQUIRED: 10 MM (2 OCCUPANTS x 5 MM PER OCCUPANT) PROPOSED EGRESS CAPACITY: (1) 900 MM DOORS

- 9. <u>NFPA 101 PARAGRAPH 38.2.6.2</u> EXIT ACCESS TRAVEL DISTANCE (NONSPRINKLERED) REQUIRED: 60 METERS PROPOSED: 4 METERS
- 10. <u>NFPA 101 PARAGRAPH 38.3.6.1(1) & (2)</u> CORRIDORS NO RATED CORRIDOR REQUIRED (NONSPRINKLERED): (1) ALL EXITS ARE AVAILABLE FROM AN OPEN FLOOR AREA (2) SPACE IS OCCUPIED BY A SINGLE TENANT
- 11. NFPA 101 PARAGRAPH 38.2.4.1 NUMBER OF EXITS BUSINESS REQUIRED: 1 MINIMUM BUSINESS PROPOSED: 1 EXIT

LEGEND:

DENOTES PATHS OF EXIT TRAVEL

DENOTES DOOR AS AN EMERGENCY EXIT

DENOTES STARTING POINT FOR TRAVEL DISTANCE

DENOTES FIRE EXTINGUISHER LOCATIONS

A/E DESIGNER OF RECORD CHAFIN N. Charleston, SC

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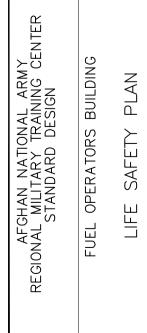
LINEAR DIMENSIONS SHOWN ARE IN MILLIMETERS (MM),





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Designed by: KRC	Dwn by: AAR	Reviewed by: LHM	Submitted by:	BAKER
U.S. ARMY CORPS OF ENGINEERS AECHANISTAN ENGINEER DISTRICT		el Baker Jr., Inc of Michael Baker Corporation	Business Park side Drive	TOWNSHIP FA 12100 bakercorp.com



Sheet reference number: A - 001

UNLESS OTHERWISE NOTED

D

A. THE APPROXIMATE LOCATION OF ROOF DEVICES AND

INFORMATION ONLY. THE CONTRACTOR SHALL BE

FOR ALL ALIKE AND SIMILAR CONDITIONS.

ITEMS ON THE ROOF IS PROHIBITED.

ROOF PLAN KEY NOTES:

ELEVATION GENERAL NOTES:

SEE STRUCTURAL DRAWINGS

ELEVATION KEY NOTES:

A. COORDINATE SIZE AND LOCATION OF OPENINGS FOR MECHANICAL ITEMS WITH MECHANICAL

B. PROVIDE STRUCTURAL LINTELS AS REQUIRED -

C. ALL EXTERIOR WALL FINISHES SHALL BE STUCCO

PANELS ON COLD-FORMED METAL FRAMING ON

OVER CMU AND CONCRETE SUBSTRATES.

D. ROOF SHALL BE CORRUGATED METAL ROOF

PENETRATIONS ARE SHOWN ON THE ROOF PLAN FOR

OF THESE AND ALL OTHER ITEMS PRIOR TO BEGINNING

CONSTRUCTION. COORDINATE ALL ROOF PENETRATIONS

WITH STRUCTURAL, MECHANICAL AND PLUMBING WORK.

B. UNLESS OTHERWISE NOTED, NOTES, DETAILS OR FEATURES

INDICATED FOR ONE CONDITION SHALL BE APPLICABLE

C. STOCKPILING OF MATERIALS, EQUIPMENT AND ANY OTHER

D. ROOFS SHALL BE CORRUGATED METAL ROOF PANELS ON

COLD-FORMED METAL FRAMING ON CONCRETE SLAB.

1. CONTINUOUS METAL RIDGE VENT SEE DETAIL 4/A-501.

- A. DIMENSIONS ARE SHOWN TO OUTER EDGE OF EXTERIOR STRUCTURAL COLUMNS, STRUCTURAL COLUMN GRID, EDGE OF INTERIOR PARTITIONS, EDGE OF WINDOW OPENINGS, RESPONSIBLE FOR UNDERSTANDING THE ACTUAL LOCATION AND TO HINGE SIDE OF DOOR FRAME OPENINGS.
 - B. HINGE SIDE OF OPENINGS FOR DOORS AND FRAMES SHALL BE LOCATED 200 MM FROM THE ADJACENT WALL, UNLESS NOTED OTHERWISE.
 - COSMETIC REPAIR OF MINOR DEFECTS: REPAIR OR FILL MORTAR JOINTS AND MINOR DEFECTS, INCLUDING BUT NOT LIMITED TO SPALLS, IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND PRIOR TO COATING APPLICATION. SURFACES TO BE PAINTED SHALL BE CLEAN AND FREE OF FOREIGN MATTER BEFORE APPLICATION OF PAINT. CLEANING SHALL BE SCHEDULED SO THAT DUST AND OTHER CONTAMINANTS WILL NOT FALL ON NEWLY PAINTED SURFACES.
 - D. CONCRETE, PLASTER AND MASONRY SURFACES SHALL BE ALLOWED TO CURE FOR AT LEAST 30 DAYS BEFORE PAINTING. CONCRETE SLABS-ON-GRADE SHALL BE ALLOWED TO CURE 90 DAYS BEFORE STAINING OR SEALING.
 - E. DO NOT USE PAINT MATERIALS CONTAINING LEAD CONTENT IN EXCESS OF 0.009 PERCENT OF THE WEIGHT OF THE TOTAL NONVOLATILE CONTENT OF THE PAINT OR THE WEIGHT OF THE DRIED PAINT FILM.
 - F. DO NOT USE ANY ASBESTOS CONTAINING MATERIALS (ACM) IN PROJECT. ACM IS DEFINED AS 1% OR MORE BY VOLUME.
 - G. DO NOT USE PAINT MATERIALS CONTAINING MERCURIAL FUNGICIDES.
 - H. FACTORY PRIMED METAL DOORS AND FRAMES SHALL RECEIVE TWO COATS OF PAINT.
 - FILL REMAINING SPACE AT PENETRATIONS IN FIRE-RATED FLOORS, PARTITIONS AND CEILINGS WITH APPROPRIATE FIRESTOPPING MATERIALS.
 - J. ALL CEILING FINISHES SHALL BE PAINTED PLASTER APPLIED TO STRUCTURE.
 - K. ALL WALL FINISHES SHALL BE PAINTED PLASTER APPLIED TO STRUCTURE.
 - L. ALL FLOOR FINISHES SHALL BE SEALED CONCRETE.

FLOOR PLAN KEY NOTES:

1. LINE OF ROOF OVERHANG ABOVE.

2. CONCRETE STOOP WITH GRATE — SEE DETAIL 1/A-503.

- LEGEND:
- 2. NOT USED

4/A-501.

CONCRETE SLAB.

DRAWINGS.

- 3. NOT USED
- 4. NOT USED
- 5. EXTERIOR LIGHT FIXTURE SEE ELECTRICAL.

1. CONTINUOUS METAL RIDGE VENT - SEE DETAIL

DOOR FRAME AND HARDWARE TYPE, SEE SHEET A-601

WINDOW TYPE, SEE SHEET A-601

KEY NOTE

ABBREVIATIONS:

ELEC ELECTRICAL

MECHANICAL

JANITOR

CLOS CLOSET

COMM COMMUNICATIONS



US ARMY CORPS OF ENGINEERS AFGHANISTAN ENGINEER DISTRICT

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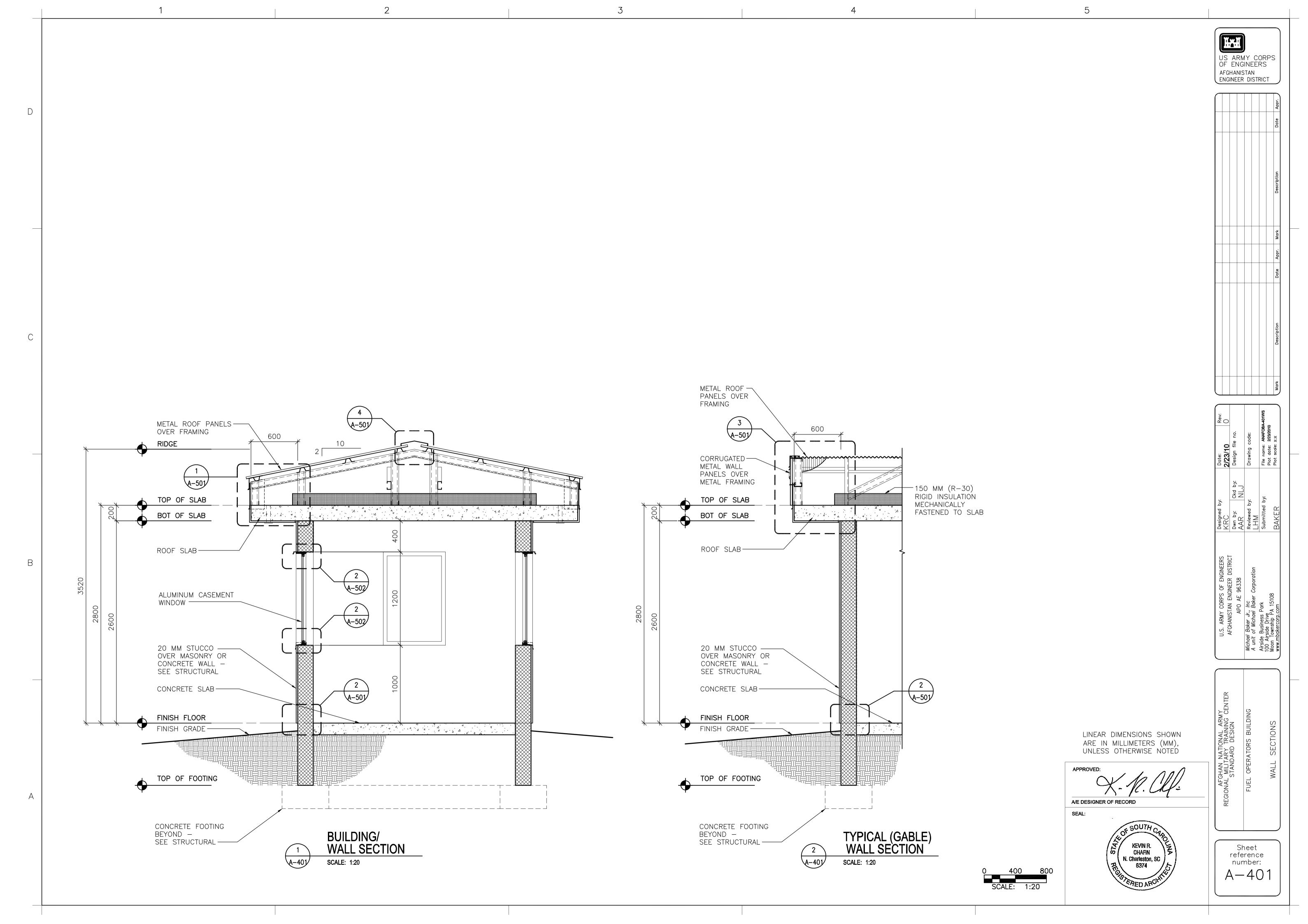
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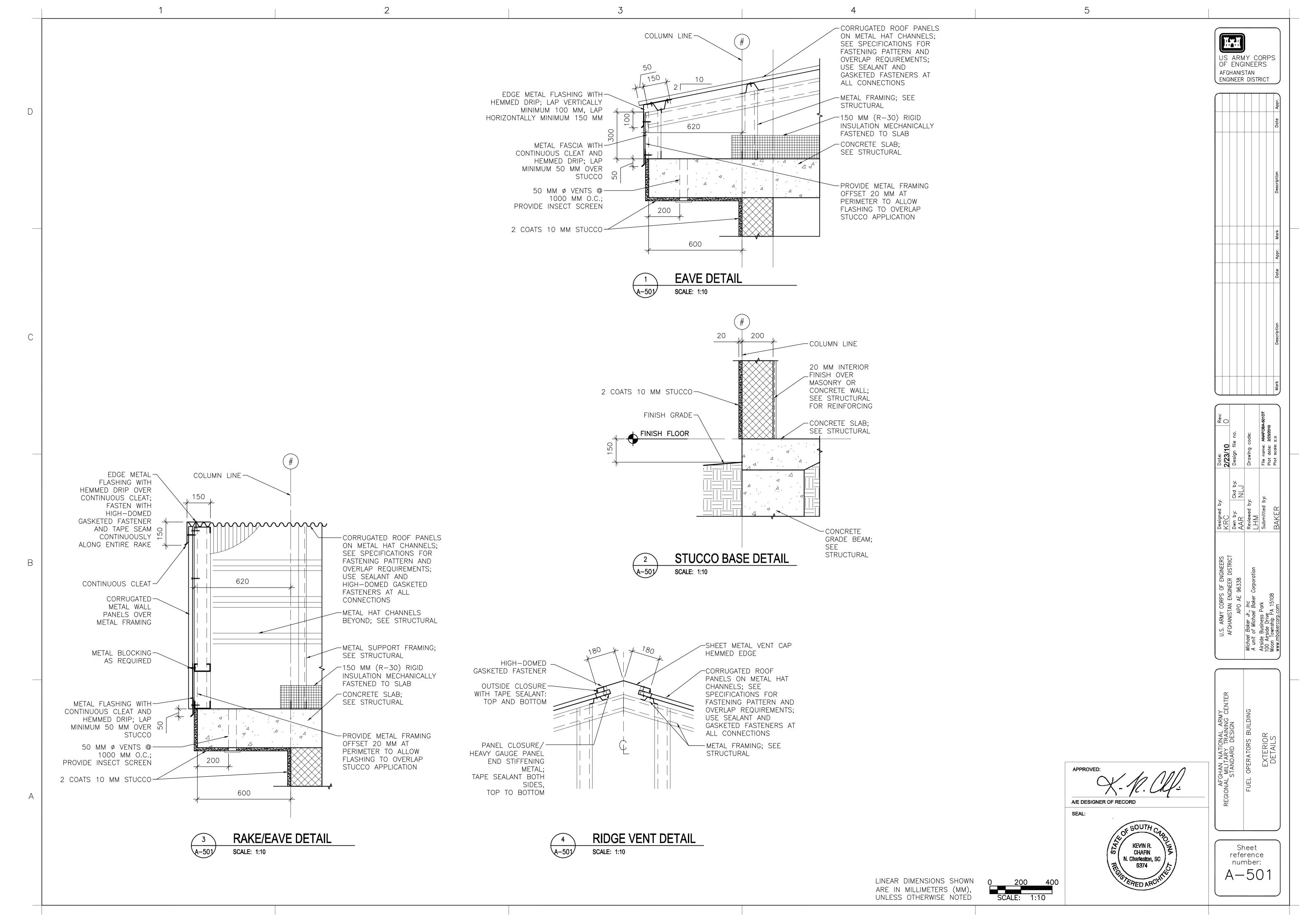
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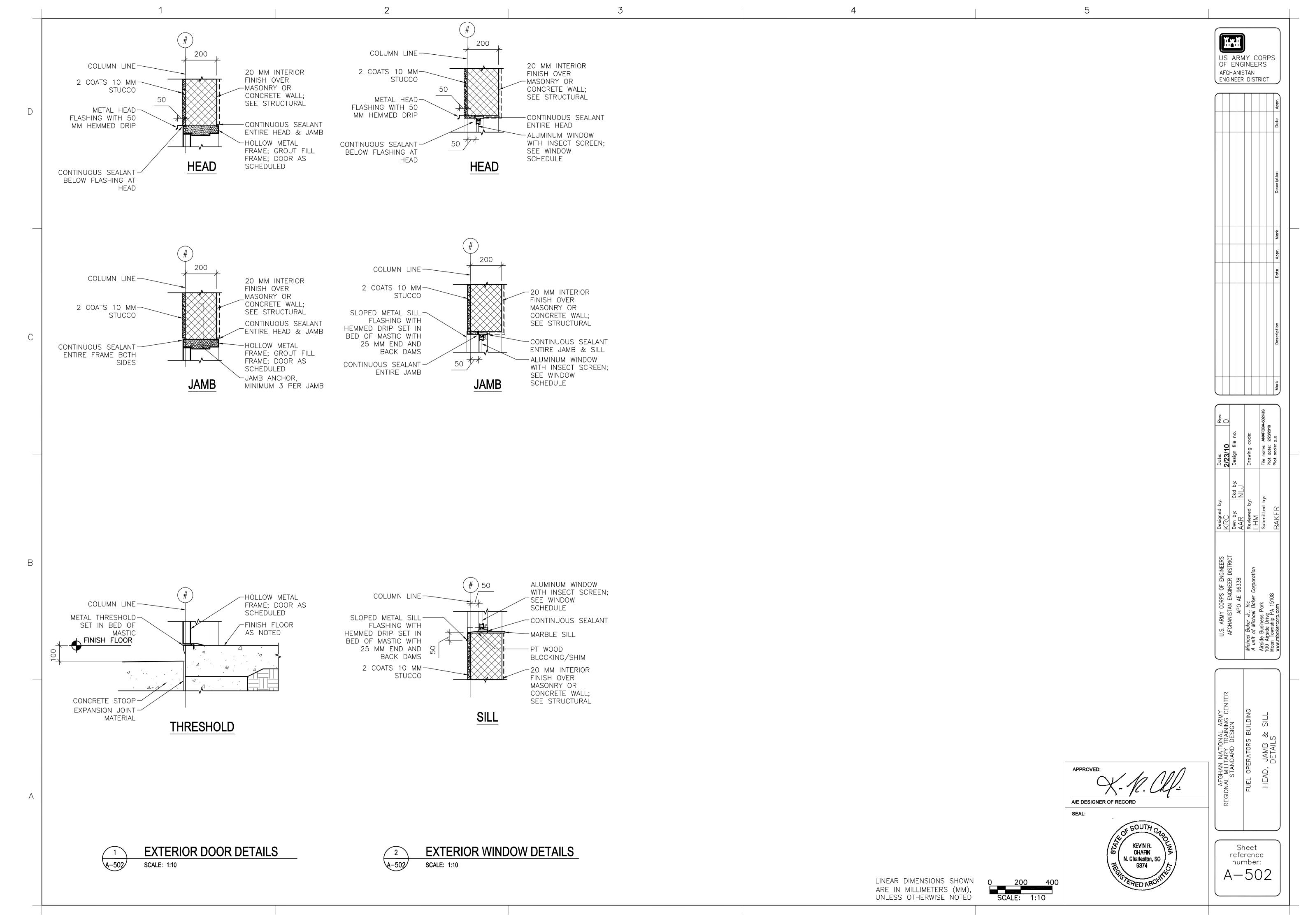
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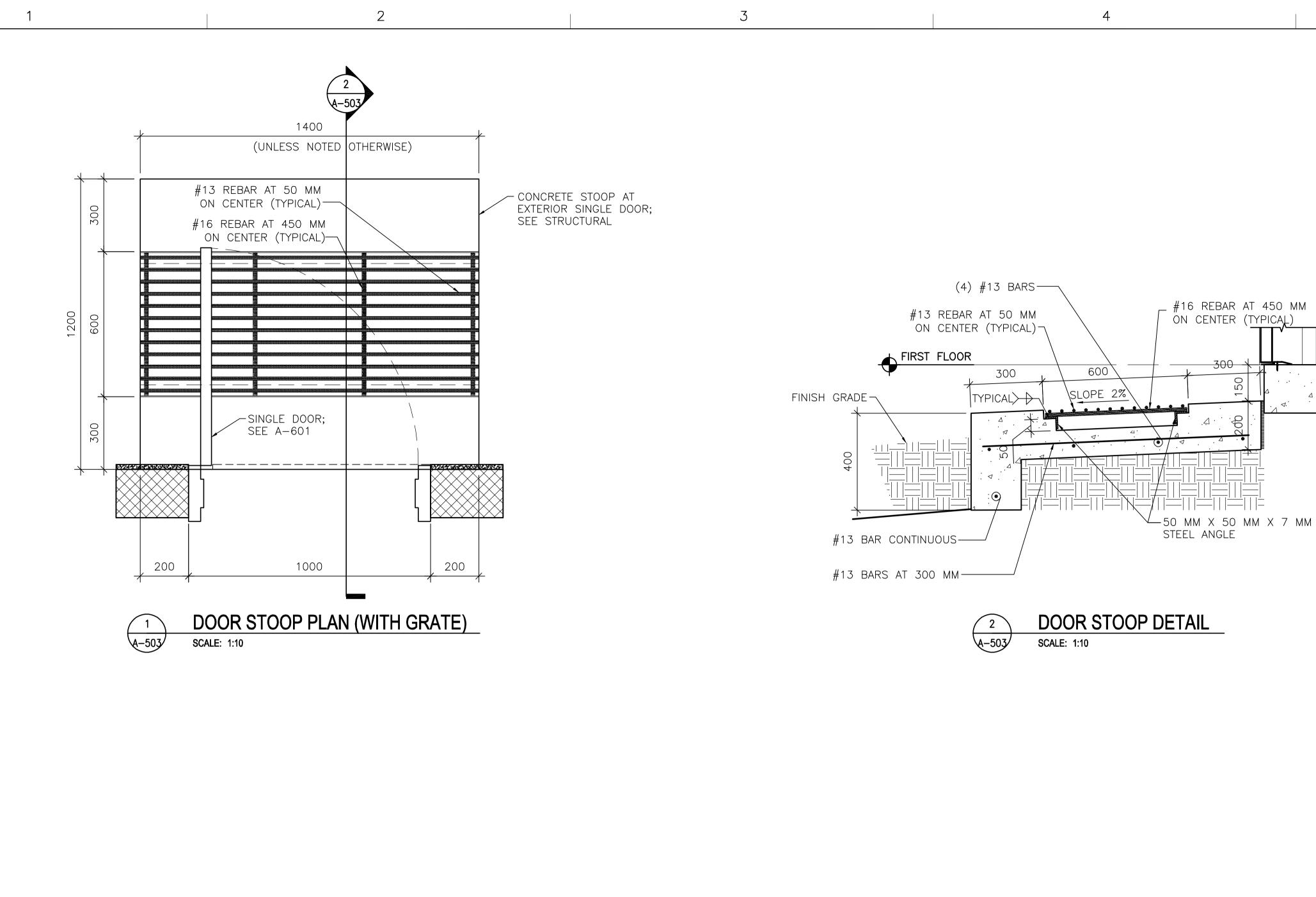
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LINEAR DIMENSIONS SHOWN ARE IN MILLIMETERS (MM), UNLESS OTHERWISE NOTED

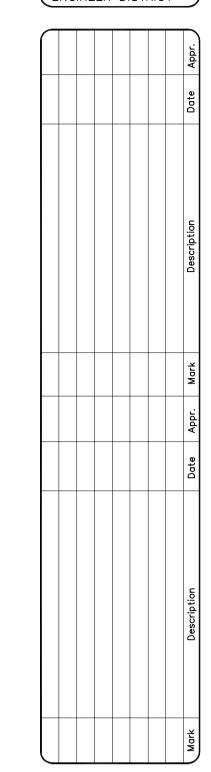








US ARMY CORPS
OF ENGINEERS
AFGHANISTAN
ENGINEER DISTRICT



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AFGHAN NATIONAL ARMY
REGIONAL MILITARY TRAINING CENTER
STANDARD DESIGN
FUEL OPERATORS BUILDING
STOOP
DETAILS

A/E DESIGNER OF RECORD

KEVIN R. CHAFIN N. Charleston, SC 6374

Sheet reference number: A-503

D

THIS SHEET IS STANDARD AND IS INCLUSIVE OF ALL THE DOOR/ WINDOW/ HARDWARE TYPES FOR THE ENTIRE RMTC CONTRACT. NOT ALL DOOR/ WINDOW/ HARDWARE TYPES ARE USED FOR ANY PARTICULAR BUILDING DESIGN. CONTRACTOR SHALL REFER TO THE FLOOR PLAN FOR THE TYPES BEING USED.

II. US ARMY CORPS OF ENGINEERS AFGHANISTAN ENGINEER DISTRICT

INTERIOR DOOR HARDWARE TYPES:

- 1 EA WALL STOP, L02101 OR L02161 3 EA DOOR SILENCERS, LO3011
- 1 EA LOCKSET W/LEVER HANDLES, FO8, GRADE 1 1 EA WALL STOP, L02101 OR L02161 1 EA OVERHEAD CLOSER, CO2061, LOW RESISTANCE 3 EA DOOR SILENCERS, LO3011
- HW-7 1-1/2 PR HINGES. A8133 1 EA LOCKSET W/LEVER HANDLES, F13 GRADE 1 1 EA WALL STOP, L02101 OR L02161 2 EA MOP PLATE, J103
- 1-1/2 PR HINGES, A8112 1 EA LOCKSET W/LEVER HANDLES, F13 GRADE 1
 - 2 EA MOP PLATE, J103 1 EA OVERHEAD CLOSER, CO2061, LOW RESISTANCE
- 3 EA DOOR SILENCERS, LO3011
 - 1 EA CYLINDER. E09221A, GRADE 1 1 EA OVERHEAD CLOSER, CO2061, LOW RESISTANCE
 - 3 EA DOOR SILENCERS, LO3011
- 1 EA LOCKSET W/LEVER HANDLES. GRADE 1, F13 2 EA LEVER EXTENSION FLUSH BOLTS, L04081 1 EA ASTRAGAL
 - 2 EA DOOR SILENCERS, LO3011
- 1 EA LOCKSET W/LEVER HANDLES, F13, GRADE 1 1 EA WALL STOP, L02101 OR L02161 1 EA OVERHEAD CLOSER, CO2061, LOW RESISTANCE
 - 3 EA DOOR SILENCERS, LO3011 1 EA ROBE HOOK
- HW-12 1-1/2 PR HINGES, A8133 1 EA LATCHSET W/LEVER HANDLES, F76 GRADE 1
- SELECTED BY THE CONTRACTING OFFICER. 1 EA ROBE HOOK 2. FRAMES, EXCEPT FIRE-RATED FRAMES, SHALL BE MOUNTED AND ADJUSTED IN ACCORDANCE WITH
- JAMB AT EQUAL INTERVALS. 3. DIMENSIONS SHOWN ON DOOR TYPES DETAIL ARE BASED UPON MODULAR MASONRY (OR ROUGH OPENING), HEIGHT OF 2200 MM FOR STANDARD PERSONNEL DOORS. CONTRACTOR SHALL

4000

EXTERIOR DOOR HARDWARE TYPES:

HW-1 1-1/2 PR HINGES, A5112 114 X 114

1 EA THRESHOLD, J32130

1 EA THRESHOLD, J32130

HW-3 3 PR HINGES, A5112 114 X 114

2 EA CYLINDER. GRADE

1 EA THRESHOLD, J32130

HW-4 3 PR HINGES. A5112 114 X 114

1 EA THRESHOLD, J32130

2 EA DOOR SILENCERS, LO3011

DOOR AND HARDWARE NOTES:

1 EA ASTRAGAL

1 EA ASTRAGAL

1 EA RIM EXIT DEVICE, TYPE 1

3 EA DOOR SILENCERS, LO3011

3 EA DOOR SILENCERS, LO3011

2 EA RIM EXIT DEVICE, TYPE 1

2 EA DOOR SILENCERS, LO3011

1 EA DOOR COORDINATOR, TYPE 21

HW-2 1-1/2 PR HINGES, A5112 114 X 114

1 EA CYLINDER. E09221A, GRADE

1 EA OVERHEAD CLOSER, CO2061, LOW RESISTANCE

1 EA OVERHEAD CLOSER, CO2061, LOW RESISTANCE

2 EA OVERHEAD CLOSER, CO2061, LOW RESISTANCE

1 EA LOCKSET W/LEVER HANDLES. GRADE 1. F13

2 EA LEVER EXTENSION FLUSH BOLTS, LO4081

1. INTERIOR AND EXTERIOR METAL DOORS AND FRAME

COLORS SHALL MATCH ADJACENT WALL COLORS AS

MANUFACTURER'S INSTRUCTIONS. FRAMES SHALL BE

FASTENED WITH MINIMUM OF THREE ANCHORS PER

1 EA OVERHEAD CLOSER, CO2061, LOW RESISTANCE 2 EA MAGNETIC HOLDER PIN, ATTACHED TO DOOR LEAF

2 EA MAGNETIC HOLDER RECEIVER, ATTACHED TO STOOP

1 EA LOCKSET, F13 ENTRY LOCK W/LEVER HANDLES, GRADE 1

- COORDINATE WITH DOOR SUPPLIER TO ENSURE THAT DIMENSIONS OF DOORS AND FRAMES PROVIDED ARE COMPATIBLE WITH DOOR OPENING DIMENSIONS.
- 4. HARDWARE SHALL BE HEAVY DUTY, COMMERCIAL GRADE, STAINLESS STEEL WITH A SATIN OR BRUSHED FINISH.
- 5. HARDWARE TYPES INCLUDE BUILDERS HARDWARE MANUFACTURERS ASSOCIATION (BMHA) NUMBER.
- 6. DOORS IN 2 HOUR RATED PARTITIONS SHALL BE 1.5 HOUR (90 MINUTE) RATED DOORS IN ACCORDANCE WITH NFPA 101, TABLE 8.3.4.2.
- 7. DOORS AT STAIR ENCLOSURES SHALL BE 1 HOUR (60 MINUTE) RATED AT 1 HOUR WALL IN ACCORDANCE WITH NFPA 101, TABLE 8.3.4.2.
- 8. DOORS IN 1 HOUR RATED WALLS SHALL BE 3/4 HOUR (45 MINUTE) RATED DOORS IN ACCORDANCE WITH NFPA 101, TABLE 8.3.4.2.
- 9. DOORS IN 1 HOUR RATED CORRIDOR WALLS SHALL BE 1/3 HOUR (20 MINUTE) IN ACCORDANCE WITH NFPA 101, TABLE 8.3.4.2.
- 10. PROVIDE DOOR STOPS TO PROTECT WALLS ON LOCATIONS WHERE DOOR SWING WILL STRIKE WALL.

HW-5 1-1/2 PR HINGES, A8133 114 X 114 1 EA LOCKSET W/LEVER HANDLES, FO8, GRADE 1

1-1/2 PR HINGES, A8112 114 X 114

3 EA DOOR SILENCERS, LO3011

1 EA WALL STOP, L02101 OR L02161

1-1/2 PR HINGES, A5112 114 X 114 1 EA RIM EXIT DEVICE, TYPE 1

HW-10 3 PR HINGES, A5112 114 X 114

HW-11 1-1/2 PR HINGES, A8112 114 X 114

1 EA WALL STOP, L02101 OR L02161

2 EA MOP PLATE, J103 3 EA DOOR SILENCERS, LO3011

HW-13 3 PR HINGES, A5112 114 X 114 1 EA LOCKSET W/LEVER HANDLES. GRADE 1, F13 1 EA OVERHEAD CLOSER, CO2061, LOW RESISTANCE 2 EA LEVER EXTENSION FLUSH BOLTS, L04081

1 EA ASTRAGAL

2 EA DOOR SILENCERS, LO3011

HW-14 3 PR HINGES, A5112 114 X 114

2 EA RIM EXIT DEVICE, TYPE 1 2 EA CYLINDER. GRADE 1

2 EA OVERHEAD CLOSER, CO2061, LOW RESISTANCE 1 EA DOOR COORDINATOR, TYPE 21

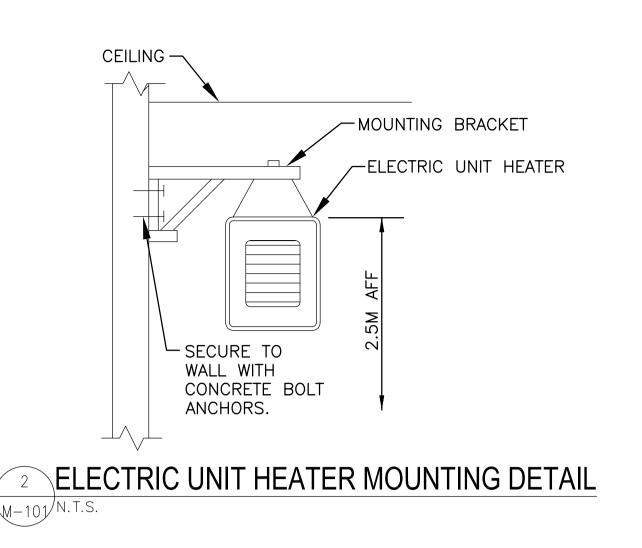
1 EA ASTRAGAL

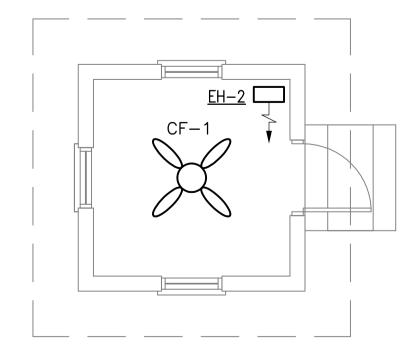
2 EA DOOR SILENCERS, LO3011



File Plot Plot

Sheet reference number: A - 60







GENERAL NOTES:

- 1. DO NOT SCALE DRAWINGS ALL DIMENSIONS AND CONDITIONS SHALL BE CHECKED AND VERIFIED BY THE CONTRACTOR AT THE
- 2. ALL WORK PERFORMED ON THIS BUILDING SHALL BE IN COMPLIANCE WITH ALL PERTINENT CODES, RULES, ORDINANCES AND REGULATIONS OF THE GOVERNING AUTHORITIES.
- 3. ALL WORK PERFORMED UNDER AND IN CONNECTION WITH THESE DRAWINGS AND SPECIFICATIONS SHALL BE IN STRICT COMPLIANCE WITH THE LATEST SAFETY AND HEALTH STANDARDS.

SYMBOLS:

X KEY NOTE

(0.050) AIR VOLUME IN CUBIC METERS PER SECOND (CMS)

DOOR UNDERCUT

TG 200x400 (8x16) TRANSFER GRILLE

ABBREVIATIONS:

AFF ABOVE FINISH FLOOR

CEILING FANS

CMS CUBIC METERS PER SECOND

STATS THERMOSTATS

EL	ECTR	IC U	NIT HEAT	ER SCHEDL	JLE
NO.	CMS	KW	F.A.T. °C	ELECT. CHAR.	MOUNTING
EH-2	.200	2.6	38	380/1/50	WALL HUNG

- 1. TOP OF UNIT HEATER SHALL BE MOUNTED 2.2M AFF.
- 2. UNIT HEATERS SHALL HAVE TAMPER PROOF INTEGRAL STATS.
- 3. COORDINATE LOCATION AND ORIENTATION IN FIELD.

X	CEILI	NG F	AN		
NO.	BLAD!	SIZE IN	VOLTAGE	SWITCH	REMARKS
CF-1	1320	52	220/1/50	@ WALL	3 SPEED REVERSIBLE MOTOR

NOTES:

- 1. INSTALL FANS 2.5M AFF.
- 2. PROVIDE WITH OUT LIGHT FIXTURE.
- 3. PROVIDE WITH REMOTE MOUNTED ON-OFF SWITCH SHOWN ON ELECTRICAL DRAWINGS.

						Description	
						Mark	
						Appr.	
						Date	
						Description	
						Mark	
Rev:	0			BMH-101XXX	010		

US ARMY CORPS

OF ENGINEERS AFGHANISTAN

ENGINEER DISTRICT

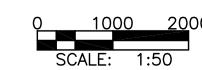
Date: Rev. 02/23/10	Design file no.	Drawing code:	File name: ANAFOBMH-101	Plot scale: 1:50	
Designed by: RML	Dwn by: Ckd by:	Reviewed by: MRS	Submitted by:	BAKER	
U.S. ARMY CORPS OF ENGINEERS AFCHANISTAN ENCINEED DISTRICT	AI GLANISTAN ENGINEEN DISTRICT APO AE 96338	Michael Baker Jr., Inc A unit of Michael Baker Corporation	Airside Business Park 100 Airside Drive	Moon Iownship PA 15108 www.mbakercorp.com	

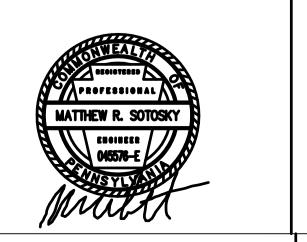


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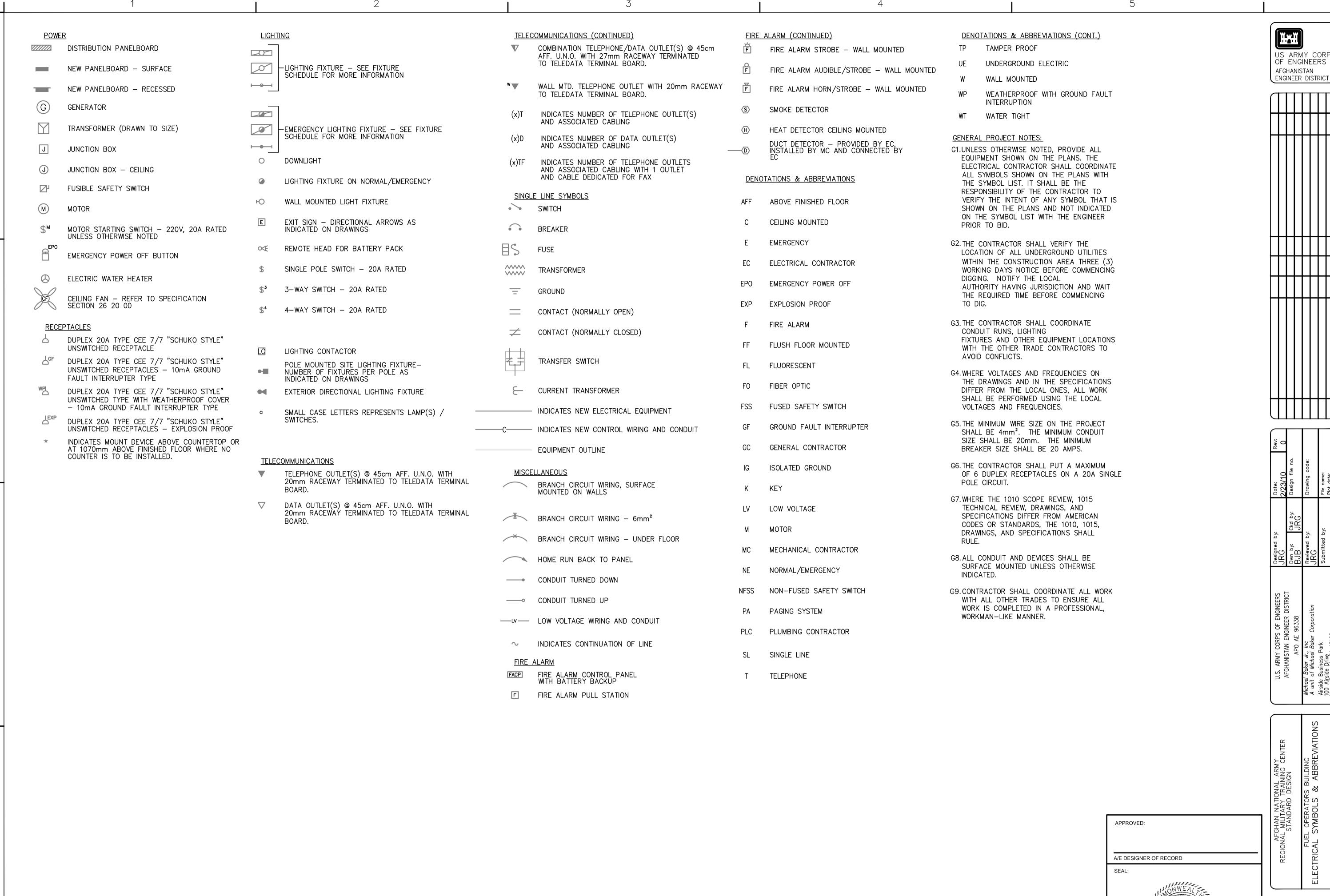
LINEAR DIMENSIONS SHOWN ARE IN MILLIMETERS (MM), UNLESS OTHERWISE NOTED



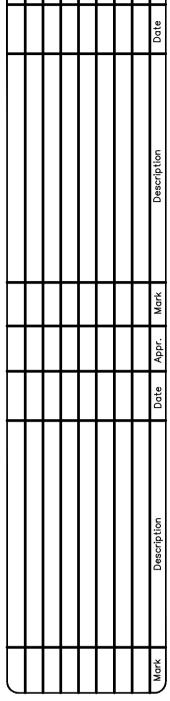


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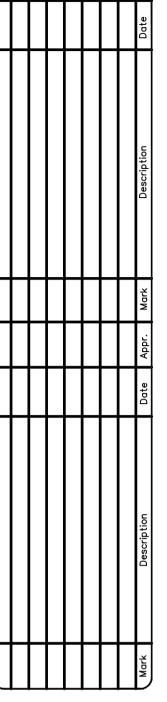


US ARMY CORPS OF ENGINEERS AFGHANISTAN

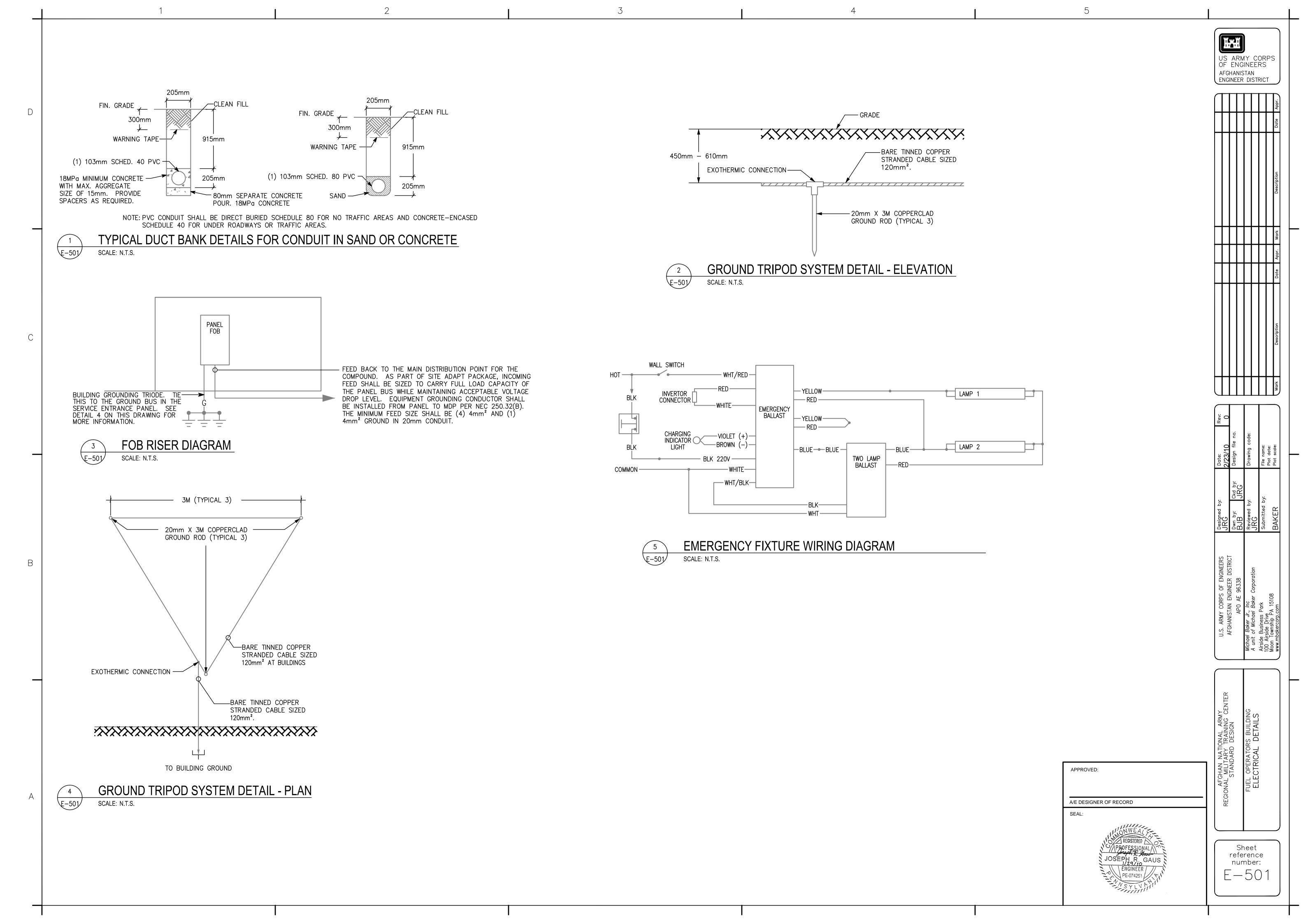


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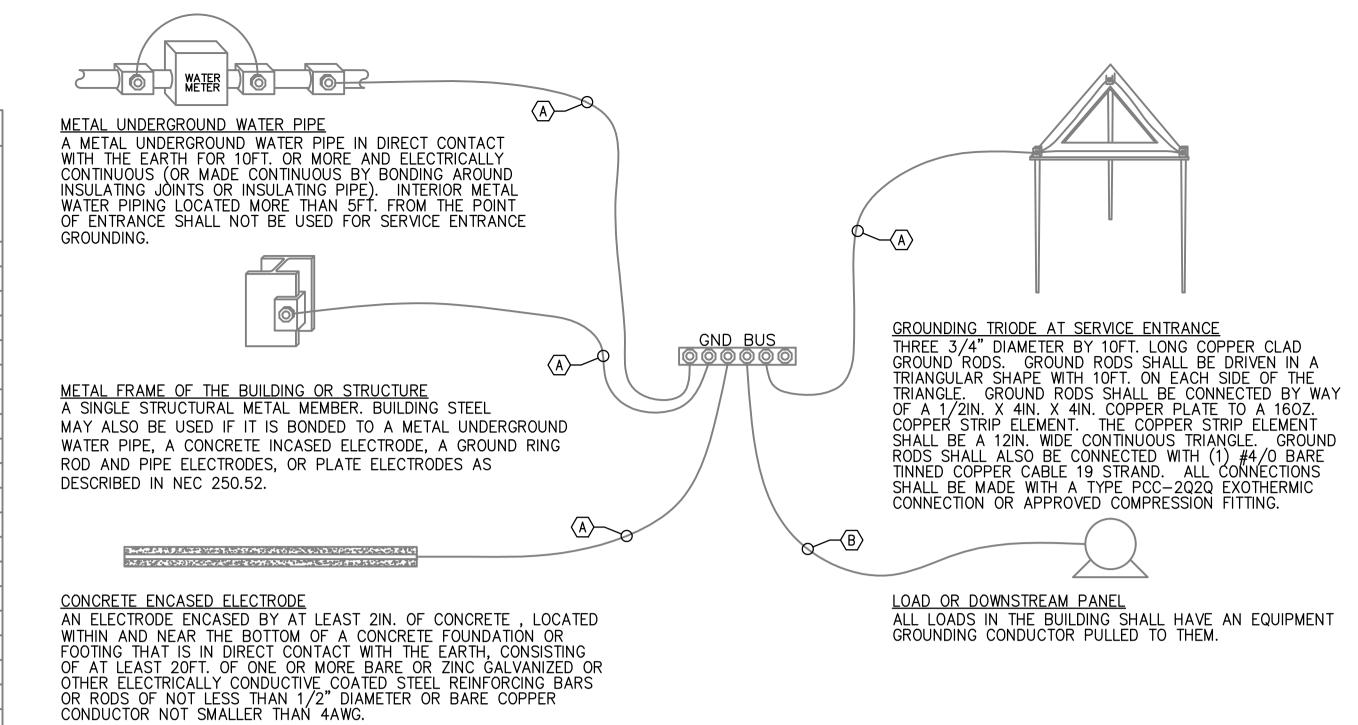
GENERAL NOTES: 1. REFER TO DRAWING #E-001 FOR THE ELECTRICAL SYMBOLS LIST. US ARMY CORPS OF ENGINEERS 2. EXIT SIGNS SHALL BE WIRED AHEAD OF ANY LOCAL SWITCHING ON CIRCUITS. AFGHANISTAN ENGINEER DISTRICT 3. REFER TO DRAWING #E-601 FOR THE LIGHTING FIXTURE SCHEDULE. 4. REFER TO DRAWING #E-501 FOR THE POWER RISER. 5. REFER TO DRAWING #E-602 FOR PANEL SCHEDULES. 6. LIGHT FIXTURES INDICATED AS EMERGENCY SHALL BE PROVIDED WITH A BATTERY BACKUP BALLAST. SEE WIRING DIAGRAM DETAIL 5, DRAWING #E-501. 7. COORDINATE EXACT MOUNTING LOCATION OF DISCONNECTING MEANS FOR MECHANICAL AND PLUMBING EQUIPMENT IN THE FIELD. 8. FUSIBLE SAFETY SWITCHES THAT ARE NOT OTHERWISE IDENTIFIED SHALL BE 380V, 1P, 30A FUSED SAFETY SWITCHES WITH 20A FUSES. NUMBERED NOTES: EMERGENCY POWER OFF SWITCH TO DISABLE FUEL DISPENSING EQUIPMENT. 2 PANEL FOB. 3 PROVIDE 1200mm X 2400mm SHEET OF PLYWOOD **ROOM** PAINTED WITH FIRE RESISTANT PAINT FOR MOUNTING TELECOMMUNICATIONS EQUIPMENT. 4 PROVIDE CONDUIT STUB UP IN THE ROOM FOR INCOMING TELECOMMUNICATIONS SERVICES FROM THE CENTRAL COMMUNICATIONS SYSTEM IN THE GARRISON. 5 PROVIDE POWER CONNECTION TO ELECTRIC UNIT HEATER #2. SEE DRAWINGS #M-101 AND #E-602 FOR MORE ÏNFORMATION. 6 4 20mm CONDUIT RUNS TO CIRCUITS FEEDING POWER AND LIGHTING AT VEHICLE REFUELING POINT AND FUEL STORAGE. CONDUIT SHALL BE RMC/IMC WITH LISTED SEALS AND INSTALLED IN ACCORDANCE WITH NEC ART. 514. FUELING OBSERVATION BUILDING FLOOR PLAN - LIGHTING E-101 SCALE: 1:25 FOB-3,5 Micl A L Airs 100 Moo www AFGHAN NATIONAL ARMY VAL MILITARY TRAINING CEN STANDARD DESIGN ROOM 4 APPROVED: A/E DESIGNER OF RECORD FUELING OBSERVATION BUILDING FLOOR PLAN - POWER AND SYSTEMS Sheet reference SCALE: 1:25 number:



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U.S. ARMY CORPS OF ENGINEERS JE		er Corporation	rside Business Park 0 Airside Drive	



(A) LARGE	ER OF THE TWO S IN THE TABLES E	SIZES BELOW	B	EQUIPMENT GROUNDING	CONDUCTOR
	G ELECTRODE CO SED ON AIC RATII		AU1 DEVIC	ATING OR SETTING OF FOMATIC OVERCURRENT OF IN CIRCUIT AHEAD OF IPMENT, CONDUIT, ETC, EXCEEDING (AMPERES)	NECESSARY EQUIPMENT GROUNDING CONDUCTOR
AIC RATING OF SERVICE EQUIPMENT	NECESSARY ELECTRODE CO	GROUNDING NDUCTOR SIZE	NOT	EXCEEDING (AMPERES) 15	SIZE 2.5mm²
<u> </u>	(1) =	_ 2		20	4.0mm²
10K		5mm²		30	6.0mm ²
14K		0mm²		40	6.0mm ²
18K	· ,	Omm²		60	6.0mm ²
22K		Omm²	<u> </u>	100	10mm²
25K		0mm²	<u> </u>	200	16mm²
30K		5mm²	<u> </u>	300	25mm²
35K		0mm²	<u> </u>	400	25mm²
42K		0mm²	<u> </u>	500	35mm²
65K	(1) 18	5mm²	<u> </u>	600	50mm²
100K	(1) 30	00mm²	<u> </u>		
125K	(2) 18	35mm²		800	70mm²
200K	(2) 30)0mm²	<u> </u>	1000	70mm²
GROUNDIN	G FLECTRODE CO	NDUCTOR	<u> </u>	1200	95mm²
(BASED	G ELECTRODE CO ON NEC TABLE 2	250.66)		1600	120mm²
SIZE OF L	ARGEST	NECESSARY		2000	150mm²
UNGROUNDE	D SERVICE	GROUNDING		2500	185mm²
CONDUCTOR OF AREA FOR		ELECTRODE CONDUCTOR		3000	240mm²
CONDUC		SIZE		4000	300mm²
350 kcmil O	R SMALLER	35mm²		5000	400mm²
OVER 350 kcmil		70mm²		6000	400mm²
OVER 600 kcmil		70mm²	NOTE:	ALL SIZES ARE BASED OF	N COPPER
OVER 110		95mm²	1	CONDUCTORS.	
	ARE BASED ON				



SERVICE ENTRANCE GROUNDING DETAIL

SCALE: N.T.S.

US ARMY CORPS OF ENGINEERS AFGHANISTAN ENGINEER DISTRICT

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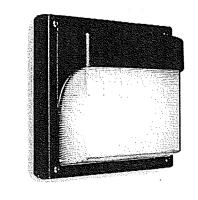
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ieen district 3338	Dwn by: Ckd by: BJB JRG	Design file no.	
rporation	Reviewed by: JRG	Drawing code:	
	Submitted by:	File name:	
	BAKER	Plot scale:	`

AFGHAN NATIONAL ARMY NAL MILITARY TRAINING CENTER STANDARD DESIGN

Sheet reference number:

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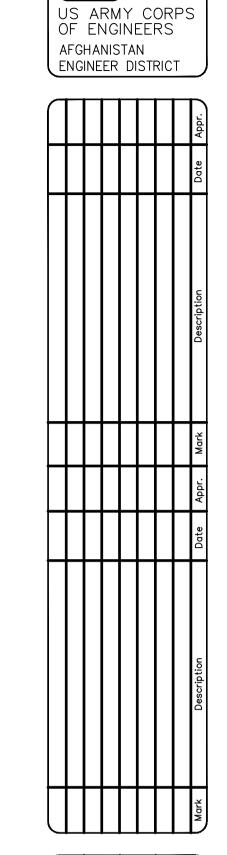
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FIXTURE MARK 'C'

FIXTURE	MARK	'G'

	LIGHT FIXTURE SCHEDULE									
FIXTURE MARK	STYLE NUMBER AND TYPE	NUMBER AND TYPE OF LAMPS	VOLTAGE	MOUNTING	NOTES					
С	INCANDESCENT ONE PIECE W/ APPROVED LENS STABILIZED HIGH IMPACT POLY CARBONATE.	(1) A19 — 100W INCANDESCENT	220V — 1ø 50HZ	WALL MOUNTED ABOVE EXTERIOR DOORS						
G	WRAP AROUND SURFACE/PENDANT MOUNTED FLUORESCENT FIXTURE WITH PRISMATIC ACRYLIC LENS AND ELECTRONIC BALLAST	(2) 32W 3500K	220V — 1ø 50HZ	SURFACE MOUNTED	FURNISHED WITH ELECTRONIC BALLAST, VIRGIN ACRYLIC WRAP AROUND LENS.					
G2	SAME AS FIXTURE 'G' WITH EMERGENCY BALLAST	(2) 32W 3500K	220V — 1ø 50HZ	SURFACE MOUNTED	FURNISHED WITH ELECTRONIC BALLAST, VIRGIN ACRYLIC WRAP AROUND LENS. EMERGENCY BALLAST WITH SELF TEST SWITCH.					
В	WEATHERPROOF BATTERY POWERED EMERGENCY LIGHT WITH 90 MINUTE MINIMUM RUN TIME.	(1) 12W/12V HALOGEN LAMP	220V – 1ø 50HZ	EXTERIOR WALL MOUNTED AT TOP OF DOOR HEIGHT						



OF ENGINEERS	Designed by: JRG	Date: Re 2/23/10	Rev:
96338	Dwn by: Ckd by: BJB JRG	Design file no.	
Corporation	Reviewed by: JRG	Drawing code:	
	Submitted by:	File name:	
	BAKER	Plot scale:	

	HAN NATIONAL A MILITARY TRAININ TANDARD DESIGN OPERATORS BUIL
DER OF RECORD	AFGHAN REGIONAL MILIT, STAND FUEL OPER
MANWEAT-	
JOSEPH R. GAUS ENGINEER	Shee referen numbe

PANELBOARD FOB SURFACE MOUNTED AMP. MAIN LUGS (OR) 20 AMP. MAIN BREAKER W/ 20 AMP. TRIP CIRCUIT BREAKER TYPE 380/220 VOLTS 3 PHASE 4 WIRE 50 HZ 100 AMP. BUS																			
	TRIP AMPS	10. OLES	WRE MM ²	GND MM ²	CONDUIT MM	LOAD SERVED	A0	OAD-KV		AO	OAD-KV BO	/A CO	LOAD SERVED	CONDUIT MM	GND MM ²	WIRE MM²	0. OLES	TRIP AMPS	Ž.
1	20	1	4.0		20	LIGHTING	0.2	ВО	CU	0.6	ВО	CU	RECEPTS - FOB	20	4.0	4.0	1	20	2
3	20		4.0	40	20	FLECTRIC LIEAT #0 FOR		1.3			0.6		RECEPTS - FOB	20	4.0	4.0	1	20	4
5	20	2	4.0	4.0	20	ELECTRIC HEAT #2 - FOB			1.3			0.4	EXTERIOR RECEPTS - FOB	20	4.0	4.0	1	20	6
7	20	1	4.0	4.0	20	CEILING FAN - FOB	0.2			0.4			VRP LIGHTING**	20	4.0	4.0	1	20	8
9	20	1				SPARE					0.5		VRP PUMP**	20	4.0	4.0	1	20	10
11	20	1				SPARE						0.5	VRP PUMP**	20	4.0	4.0	1	20	12
13	20	1				SPARE				0.8			VRP FS LIGHTING**	20	4.0	4.0	1	20	14
15	20	1				SPARE							SPARE				1	20	16
17	20	1				SPARE							SPARE				1	20	18
0.4 1.3 1.3 1.8 1.1 0.9 TOTAL CONN. LOAD PER PHASE (KVA): AO 2.2 BO 2.4 CO 2.2																			

* MAIN BREAKER SHALL BE 3P EARTH GROUND TYPE

** SEE THE VEHICLE REFUELING POINT PACKAGE FOR CONNECTION TO THE

VEHICLE REFUELING POINT (VRP) AND THE VEHICLE REFUELING POINT

FUEL STORAGE AREA (VRP FS).

US ARMY CORPS OF ENGINEERS AFGHANISTAN ENGINEER DISTRICT

				Appr.
				Date
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Date: 2/23/10	Ckd by: Design file no. JRG	Drawing code:	File name: Plot date: Plot scale:
Designed by: JRG	Dwn by: 0 BJB	Reviewed by: JRG	Submitted by: BAKER
ARMY CORPS OF ENGINEERS	MANISTAN ENGINEER DISTRICT APO AE 96338	ker Jr., Inc Michael Baker Corporation	iiness Park Drive Ship PA 15108 rcorp.com

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